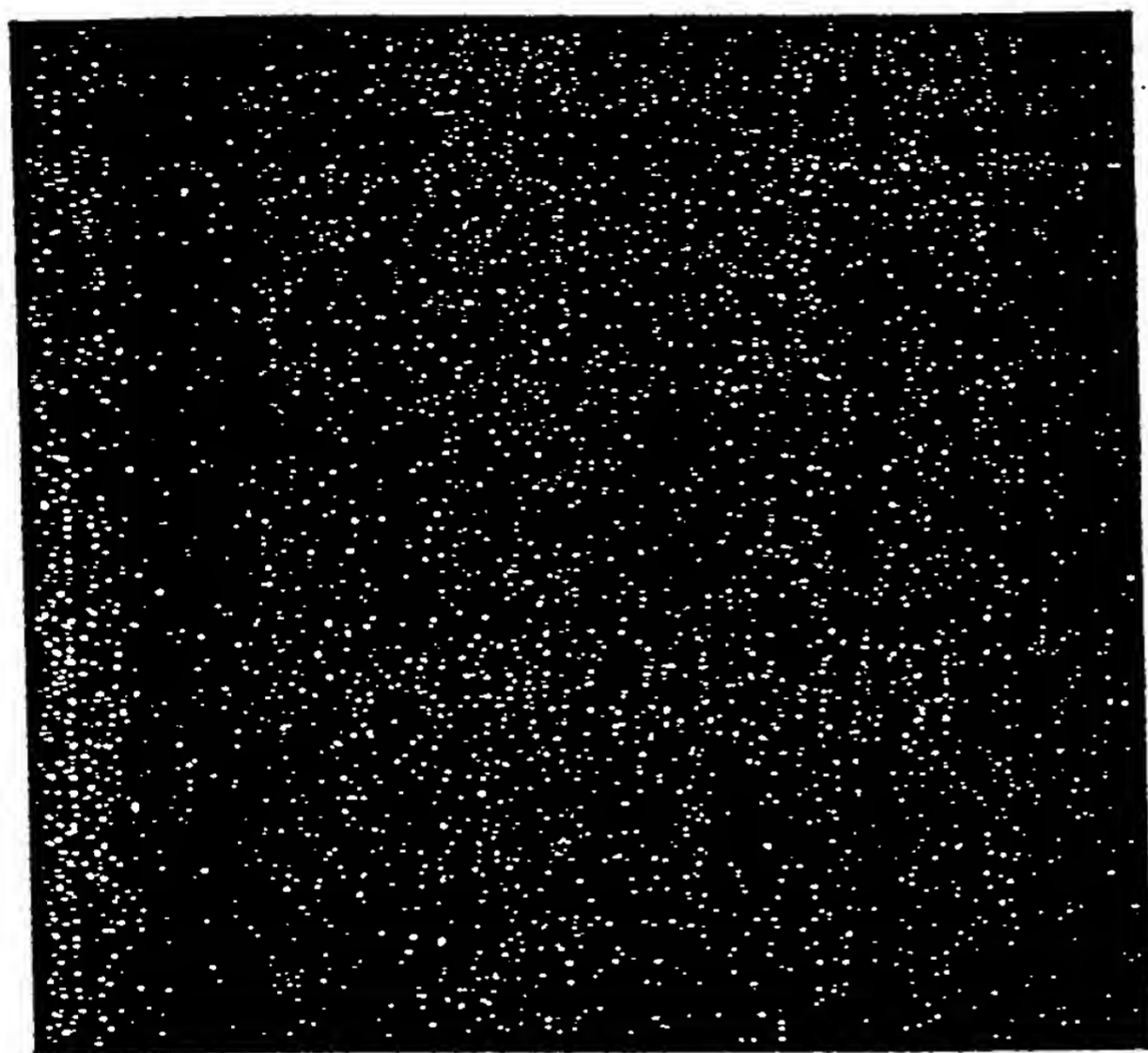


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FITC-gp96

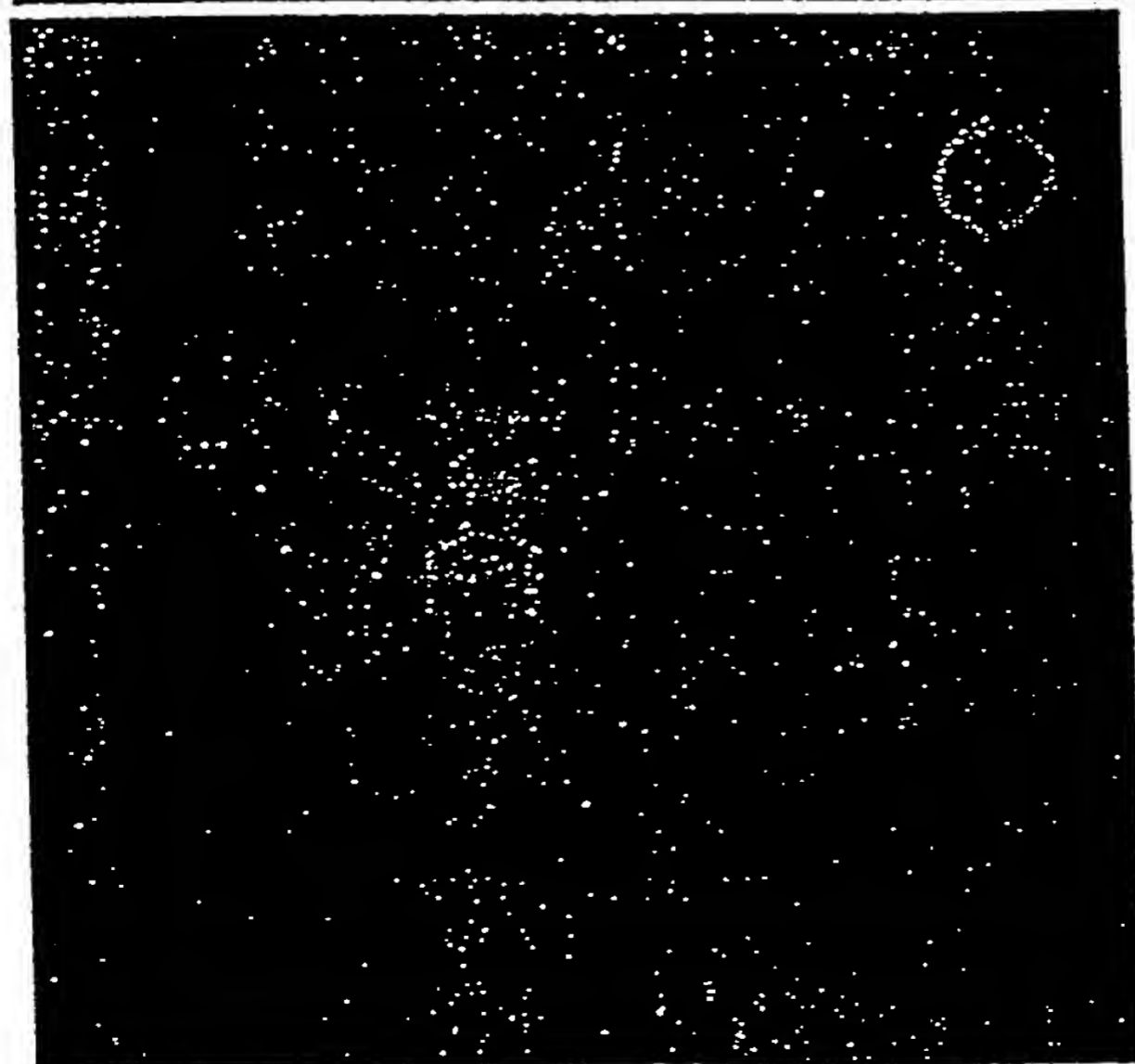


FIG. 1a

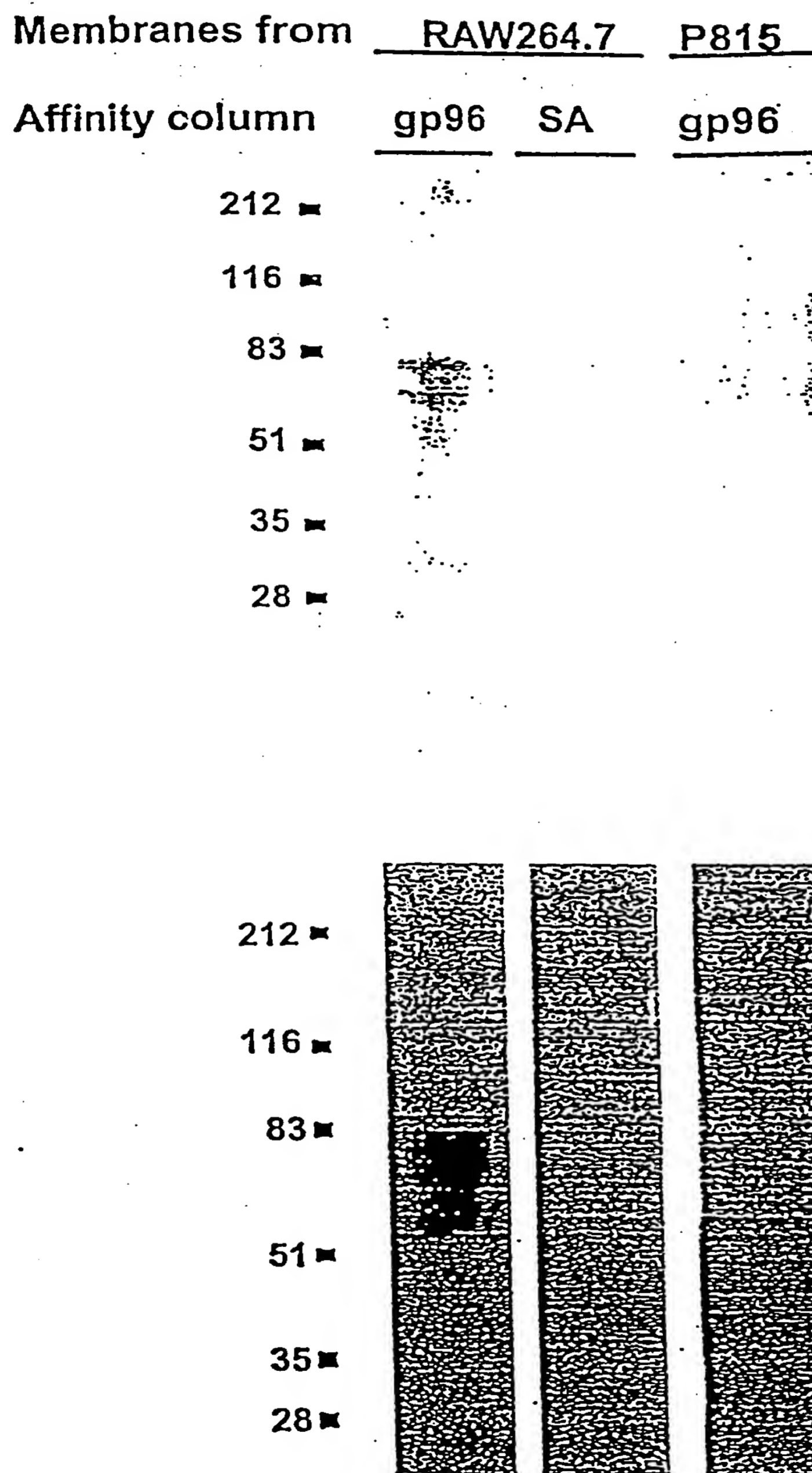


FIG. 1b

Cells	MO	MO	MO	P815
$^{125}\text{I}$ -SASD-gp96	+	+	+	+
UV	+	-	+	+
2-ME	+	+	-	+

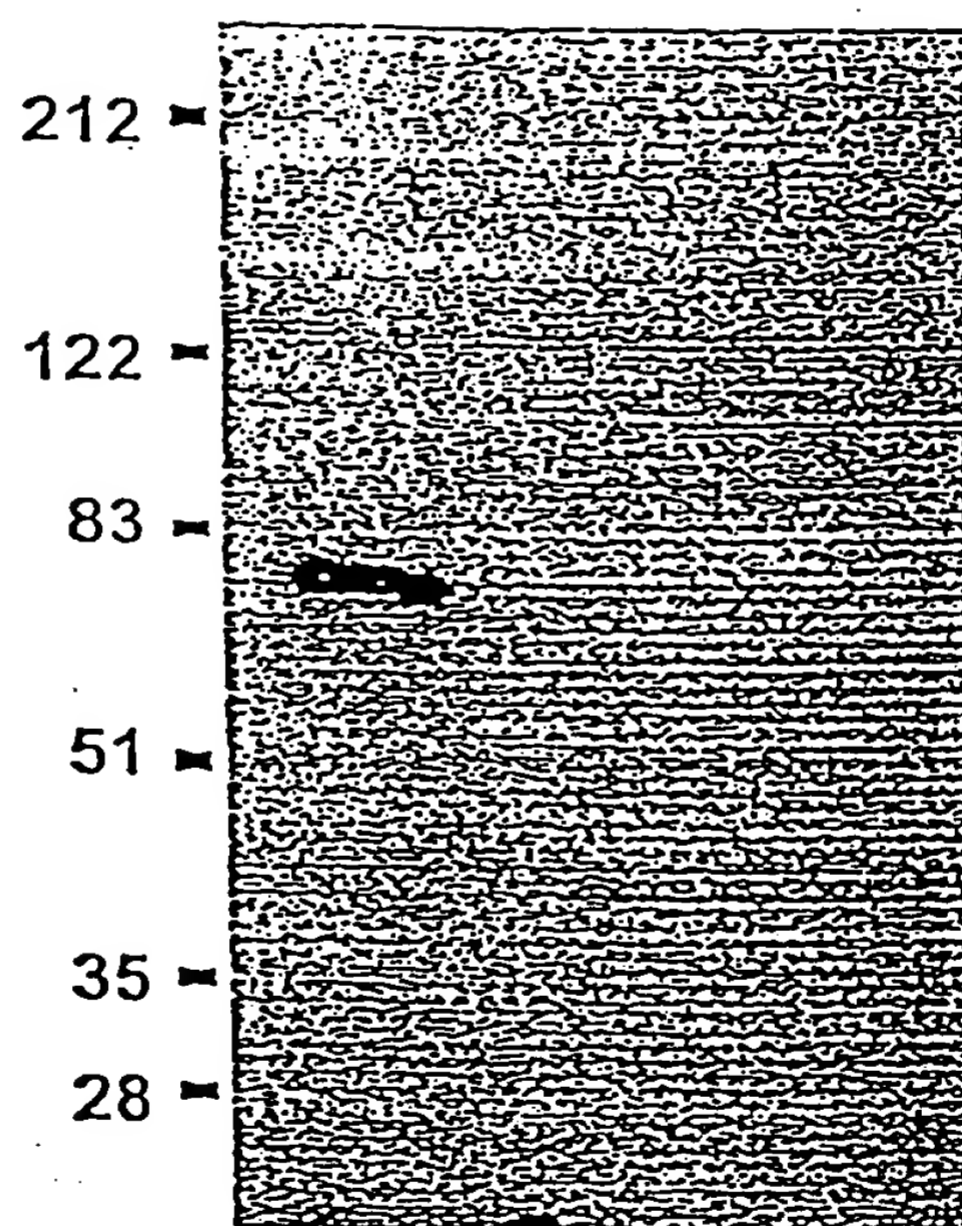


FIG. 1c

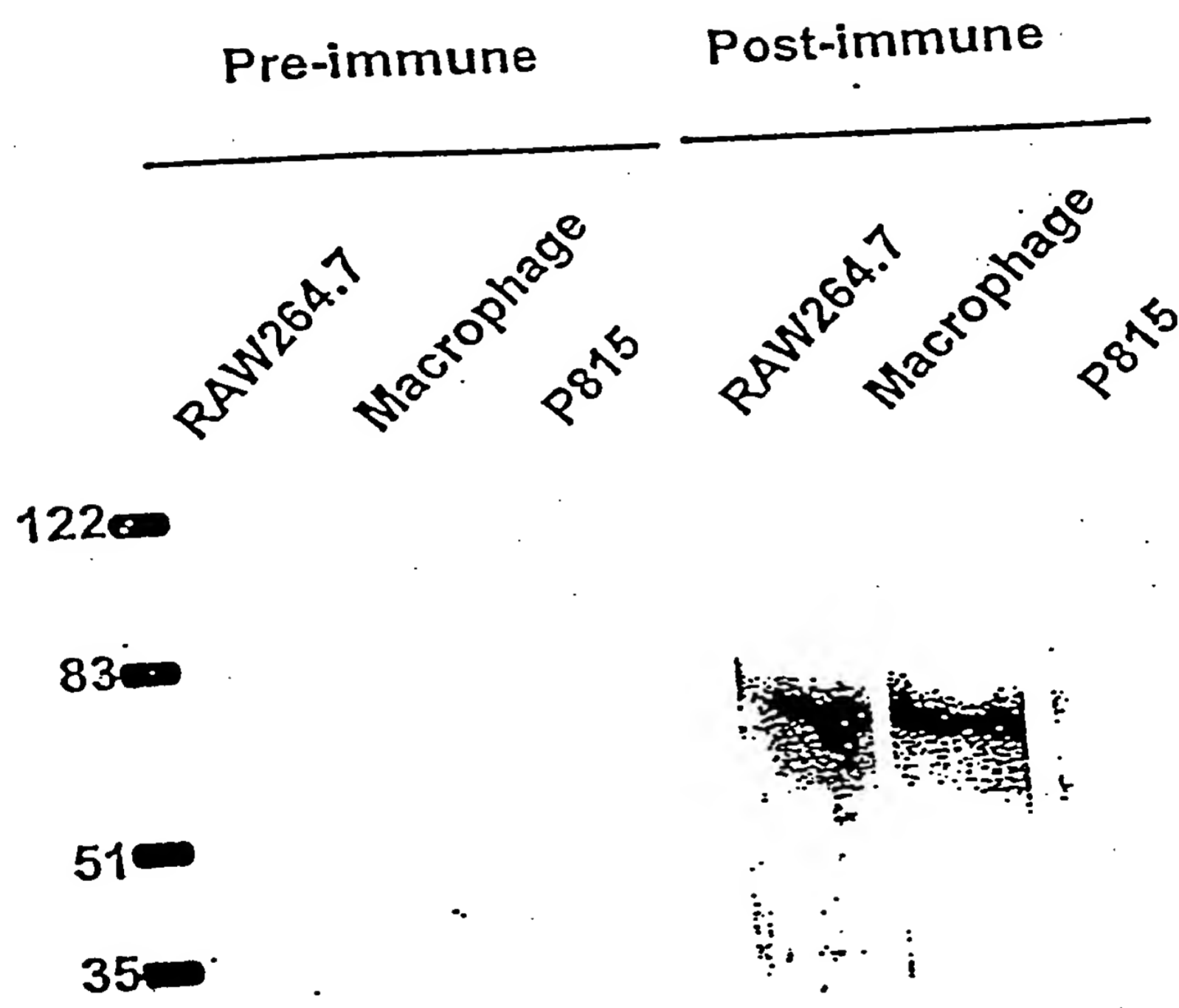


FIG. 2a

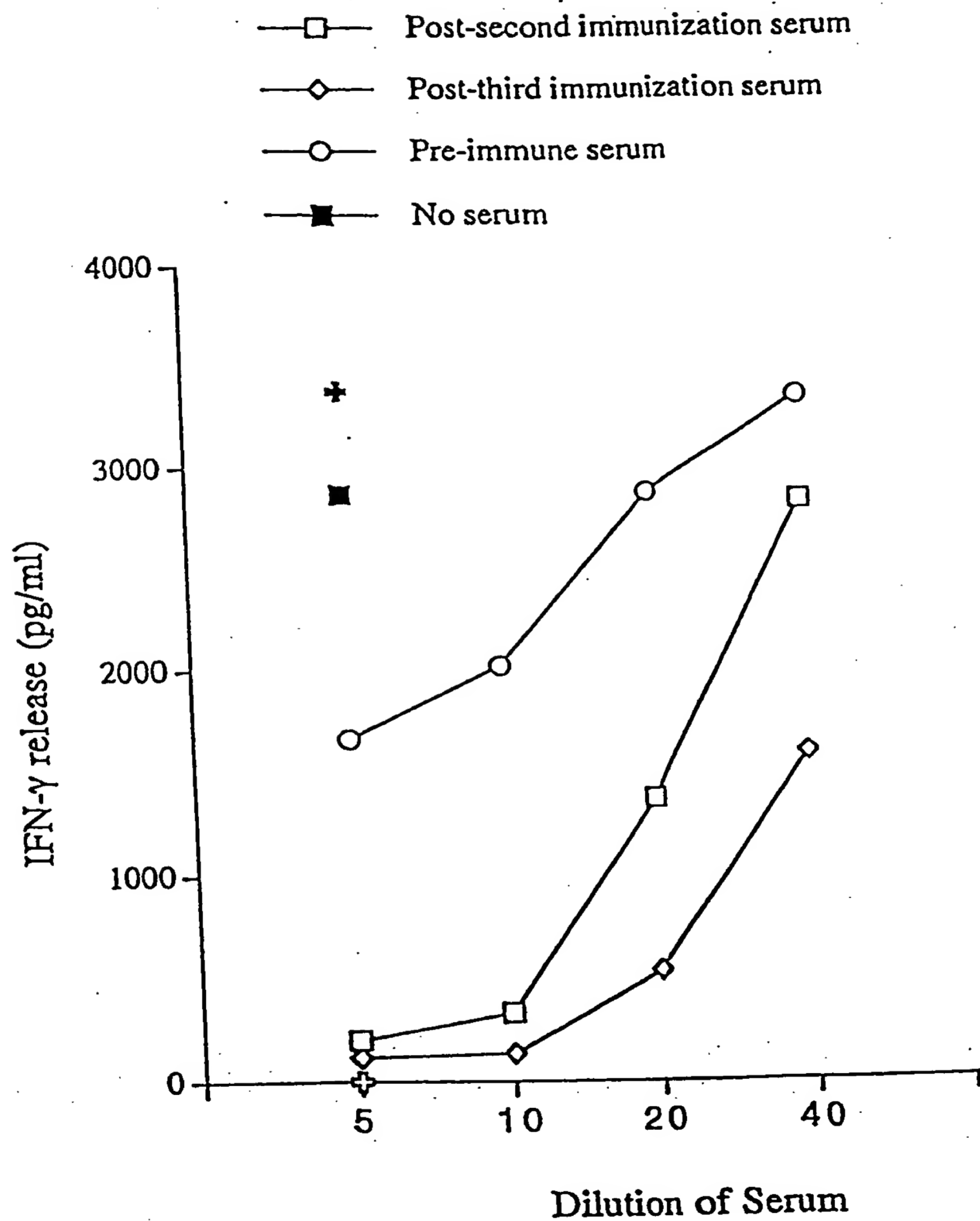


FIG. 2b

8449-178

(SHEET 6 OF 54)

Seq #	b	y	+1
G 1	58.1	-	10
G 2	115.1	1095.2	9
A 3	186.2	1038.2	8
L 4	299.3	967.1	7
H 5	436.5	853.9	6
I 6	549.6	716.8	5
Y 7	712.8	603.6	4
H 8	850.0	440.5	3
Q 9	978.1	303.3	2
R 10	-	175.2	1

FIG. 3a

B

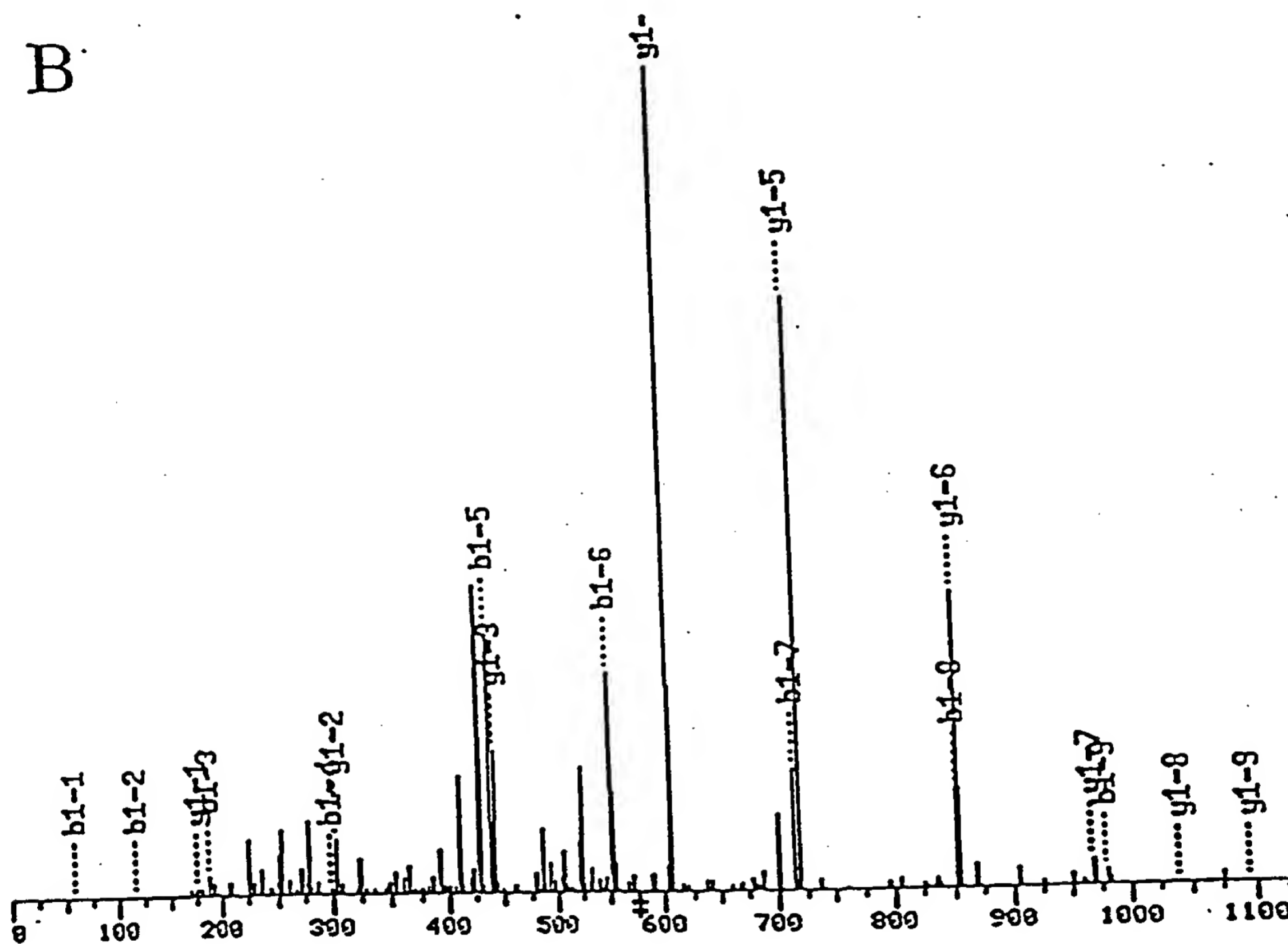


FIG. 3b

Position	MH+	Sequence
509-518	955.0122	SGFSLGSDGK (Seq ID NO: 54)
328-337	973.1753	GIALDPAMGK (Seq ID NO: 55)
460-469	1152.3010	GGALHIYHQR (Seq ID NO: 56)
338-348	1315.5116	VFFTDYGQIPK (Seq ID NO: 57)

FIG. 3c

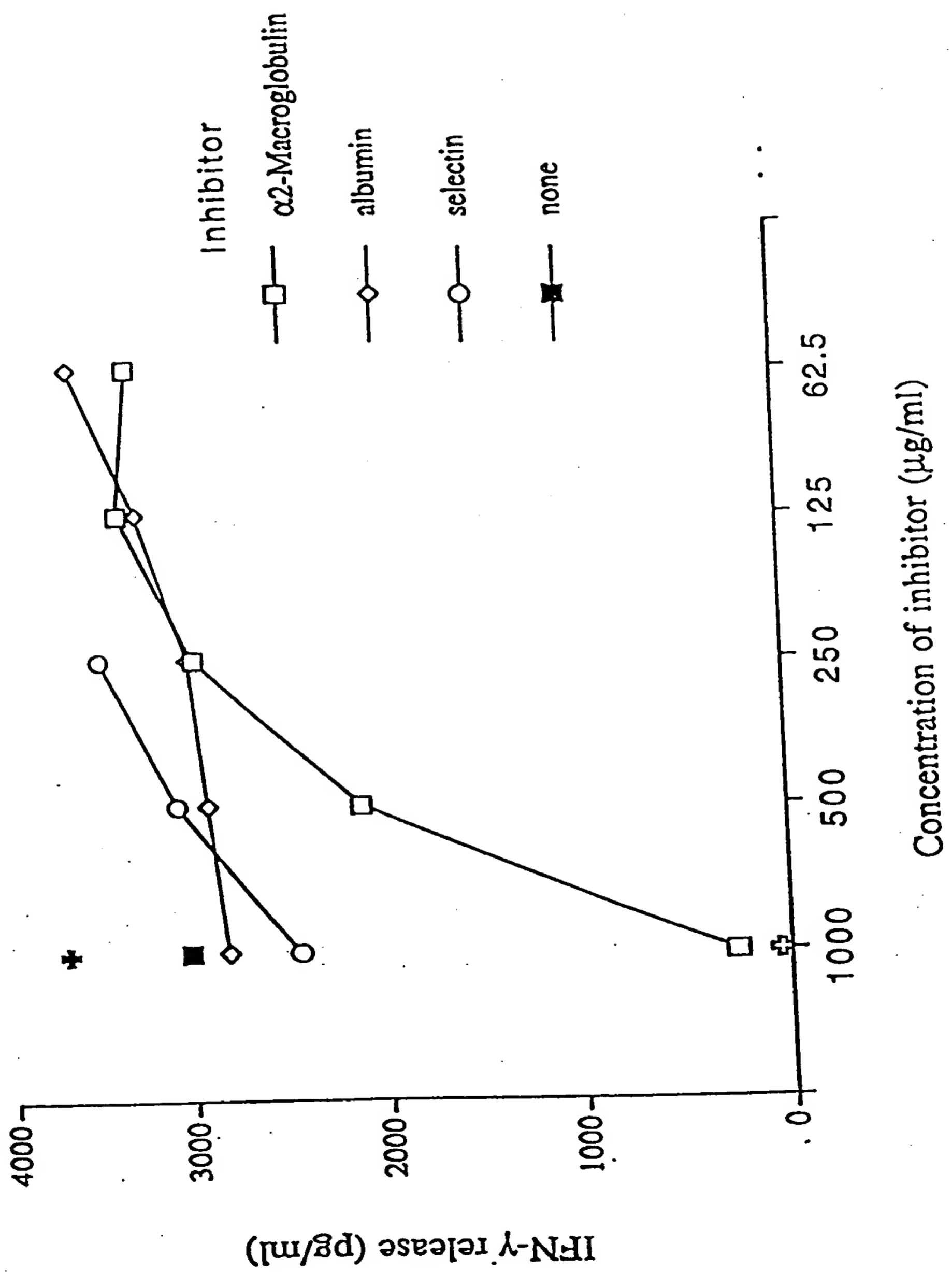


FIG. 4

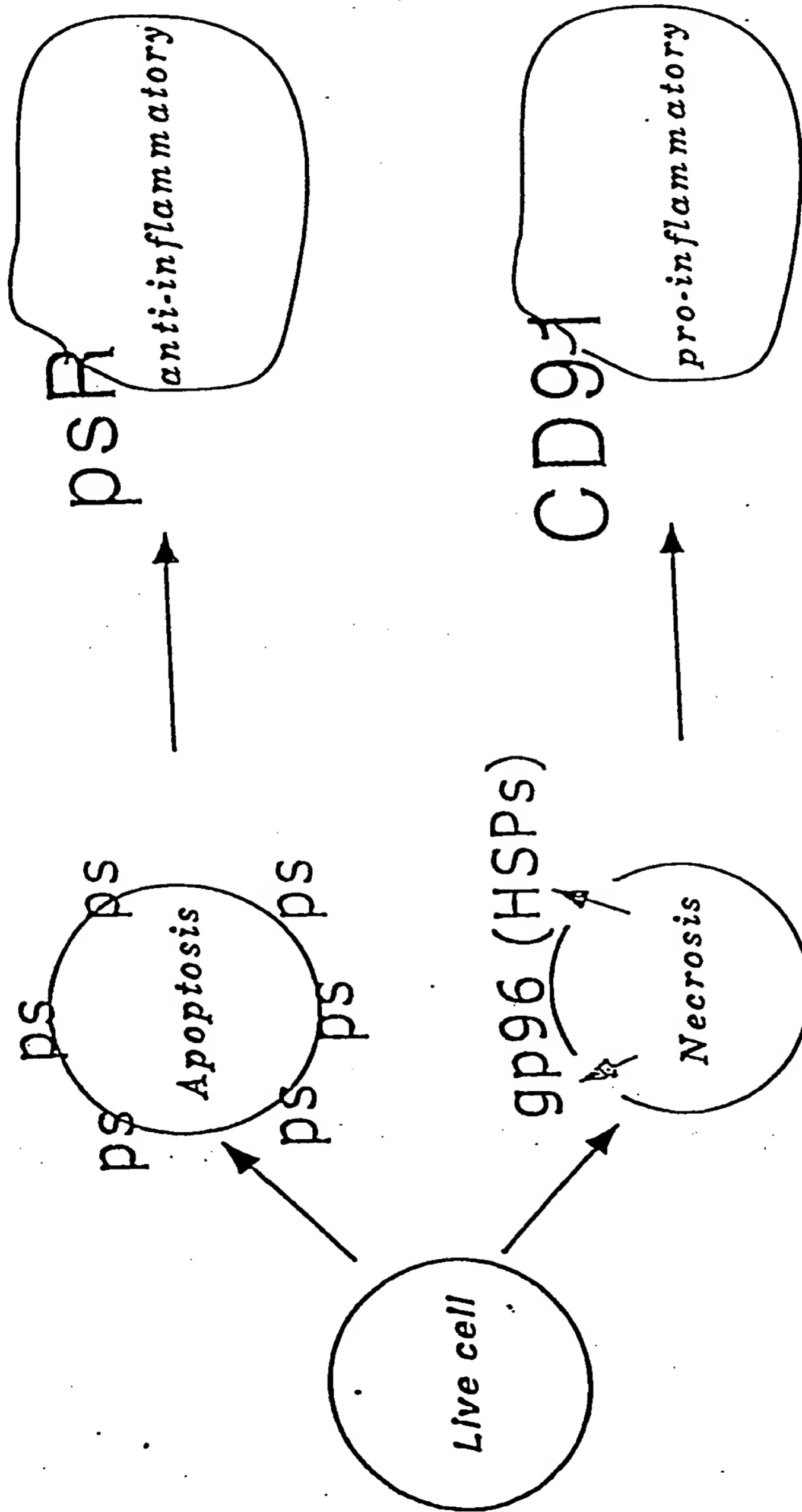


FIG. 5

8449-178

(SHEET // OF 57)

CGCTGCTCCC	CGCCAGTGCA	CTGAGGAGGC	GGAAACGGGG	GAGCCCCTAG	TGCTCCATCA	60
GGCCCCCTACC	AAGGCACCCC	CATCGGGTCC	ACGCCCCCCA	CCCCCCACCC	CGCCTCCTCC	120
CAATTGTGCA	TTTTTGCAGC	CGGAGTCGGC	TCCGAGATGG	GGCTGTGAGC	TTCGCCCTGG	180
GAGGGGGAGA	GGAGCGAGGA	GTAAAGCAGG	GGTGAAGGGT	TCGAATTTGG	GGGCAGGGGG	240
CGCACCCGCG	TCAGCAGGCC	CTTCCCAGGG	GGCTCGGAAC	TGTACCATT	CACCTATGCC	300
CCTGGTTCGC	TTTGCTTAAG	GAAGGATAAG	ATAGAAGAGT	CGGGGAGAGG	AAGATAAAGG	360
GGGACCCCCC	AATTGGGGGG	GGCGAGGACA	AGAAGTAACA	GGACCAGAGG	GTGGGGGCTG	420
CTGTTTGCAT	CGGCCCACAC	C	ATG	CTG	ACC	471
		Met	Leu	Thr	Pro	
		1		5		10
CCG	CTG	CTT	TCA	GCT	CTG	519
Pro	Leu	Leu	Ser	Ala	Leu	
			15			20
ACT	TGC	AGC	CCT	AAG	CAG	567
Thr	Cys	Ser	Pro	Lys	Gln	
			30			35
TCA	AAG	GGC	TGG	CGG	TGT	615
Ser	Lys	Gly	Trp	Arg	Cys	
		45				50
GAT	GAA	GCC	CCT	GAG	ATC	663
Asp	Glu	Ala	Pro	Glu	Ile	
		60				65
CCA	AAT	GAG	CAC	AGT	TGT	711
Pro	Asn	Glu	His	Ser	Cys	
		75				80
CGT	CTC	TGC	AAC	GGG	ATC	759
Arg	Leu	Cys	Asn	Gly	Ile	
			95			100
GCT	CAC	TGC	CGA	GAG	CTC	807
Ala	His	Cys	Arg	Glu	Leu	
			110			115
CAC	CAT	TGT	GTA	CCT	ACA	855
His	His	Cys	Val	Pro	Thr	
			125			130
AGC	TTC	CAG	CTC	GAG	GCA	903
Ser	Phe	Gln	Leu	Glu	Ala	
			140			145
TGT	TCC	GTG	TAT	GGC	ACC	951
Cys	Ser	Val	Tyr	Gly	Thr	
			155			160
TCC	TTC	ACA	TGT	GGC	TGT	999
Ser	Phe	Thr	Cys	Gly	Cys	
			175			180
CGC	TCC	TGC	AAG	GCC	AAG	1047
Arg	Ser	Cys	Lys	Ala	Lys	
			190			195

FIG. 6a

8449-178

(SHEET 12 OF 51)

CTG ATT GCC AAC TCT CAG AAC ATC CTA GCT ACG TAC CTG AGT GGG GCC	1095
Leu Ile Ala Asn Ser Gln Asn Ile Leu Ala Thr Tyr Leu Ser Gly Ala	
205 210 215	
CAA GTG TCT ACC ATC ACA CCC ACC AGC ACC CGA CAA ACC ACG GCC ATG	1143
Gln Val Ser Thr Ile Thr Pro Thr Ser Thr Arg Gln Thr Thr Ala Met	
220 225 230	
GAC TTC AGT TAT GCC AAT GAG ACC GTA TGC TGG GTG CAC GTT GGG GAC	1191
Asp Phe Ser Tyr Ala Asn Glu Thr Val Cys Trp Val His Val Gly Asp	
235 240 245 250	
AGT GCT GCC CAG ACA CAG CTC AAG TGT GCC CGG ATG CCT GGC CTG AAG	1239
Ser Ala Ala Gln Thr Gln Leu Lys Cys Ala Arg Met Pro Gly Leu Lys	
255 260 265	
GGC TTT GTG GAT GAG CAT ACC ATC AAC ATC TCC CTC AGC CTG CAC CAC	1287
Gly Phe Val Asp Glu His Thr Ile Asn Ile Ser Leu Ser Leu His His	
270 275 280	
GTG GAG CAG ATG GCA ATC GAC TGG CTG ACG GGA AAC TTC TAC TTT GTC	1335
Val Glu Gln Met Ala Ile Asp Trp Leu Thr Gly Asn Phe Tyr Phe Val	
285 290 295	
GAC GAC ATT GAC GAC AGG ATC TTT GTC TGT AAC CGA AAC GGG GAC ACC	1383
Asp Asp Ile Asp Asp Arg Ile Phe Val Cys Asn Arg Asn Gly Asp Thr	
300 305 310	
TGT GTC ACT CTG CTG GAC CTG GAA CTC TAC AAC CCC AAA GGC ATC GCC	1431
Cys Val Thr Leu Leu Asp Leu Glu Leu Tyr Asn Pro Lys Gly Ile Ala	
315 320 325 330	
TTG GAC CCC GCC ATG GGG AAG GTG TTC TTC ACT GAC TAC GGG CAG ATC	1479
Leu Asp Pro Ala Met Gly Lys Val Phe Phe Thr Asp Tyr Gly Gln Ile	
335 340 345	
CCA AAG GTG GAG CGC TGT GAC ATG GAT GGA CAG AAC CGC ACC AAG CTG	1527
Pro Lys Val Glu Arg Cys Asp Met Asp Gly Gln Asn Arg Thr Lys Leu	
350 355 360	
GTG GAT AGC AAG ATC GTG TTT CCA CAC GGC ATC ACC CTG GAC CTG GTC	1575
Val Asp Ser Lys Ile Val Phe Pro His Gly Ile Thr Leu Asp Leu Val	
365 370 375	
AGC CGC CTC GTC TAC TGG GCG GAC GCC TAC CTA GAC TAC ATC GAG GTG	1623
Ser Arg Leu Val Tyr Trp Ala Asp Ala Tyr Leu Asp Tyr Ile Glu Val	
380 385 390	
GTA GAC TAC GAA GGG AAG GGT CGG CAG ACC ATC ATC CAA GGC ATC CTG	1671
Val Asp Tyr Glu Gly Lys Gly Arg Gln Thr Ile Ile Gln Gly Ile Leu	
395 400 405 410	
ATC GAG CAC CTG TAC GGC CTG ACC GTG TTT GAG AAC TAT CTC TAC GCC	1719
Ile Glu His Leu Tyr Gly Leu Thr Val Phe Glu Asn Tyr Leu Tyr Ala	
415 420 425	
ACC AAC TCG GAC AAT GCC AAC ACG CAG CAG AAG ACG AGC GTG ATC CGA	1767
Thr Asn Ser Asp Asn Ala Asn Thr Gln Gln Lys Thr Ser Val Ile Arg	
430 435 440	

FIG. 6a

8449-178

(SHEET 13 OF 57)

GTG AAC CGG TTC AAC AGT ACT GAG TAC CAG GTC GTC ACC CGT GTG GAC Val Asn Arg Phe Asn Ser Thr Glu Tyr Gln Val Val Thr Arg Val Asp 445 450 455	1815
AAG GGT GGT GCC CTG CAT ATC TAC CAC CAG CGA CGC CAG CCC CGA GTG Lys Gly Gly Ala Leu His Ile Tyr His Gln Arg Arg Gln Pro Arg Val 460 465 470	1863
CGG AGT CAC GCC TGT GAG AAT GAC CAG TAC GGG AAG CCA GGT GGC TGC Arg Ser His Ala Cys Glu Asn Asp Gln Tyr Gly Lys Pro Gly Gly Cys 475 480 485 490	1911
TCC GAC ATC TGC CTC CTG GCC AAC AGT CAC AAG GCA AGG ACC TGC AGG Ser Asp Ile Cys Leu Leu Ala Asn Ser His Lys Ala Arg Thr Cys Arg 495 500 505	1959
TGC AGG TCT GGC TTC AGC CTG GGA AGT GAT GGG AAG TCT TGT AAG AAA Cys Arg Ser Gly Phe Ser Leu Gly Ser Asp Gly Lys Ser Cys Lys Lys 510 515 520	2007
CCT GAA CAT GAG CTG TTC CTC GTG TAT GGC AAG GGC CGA CCA GGC ATC Pro Glu His Glu Leu Phe Leu Val Tyr Gly Lys Gly Arg Pro Gly Ile 525 530 535	2055
ATT AGA GGC ATG GAC ATG GGG GCC AAG GTC CCA GAT GAG CAC ATG ATC Ile Arg Gly Met Asp Met Gly Ala Lys Val Pro Asp Glu His Met Ile 540 545 550	2103
CCC ATC GAG AAC CTT ATG AAT CCA CGC GCT CTG GAC TTC CAC GCC GAG Pro Ile Glu Asn Leu Met Asn Pro Arg Ala Leu Asp Phe His Ala Glu 555 560 565 570	2151
ACC GGC TTC ATC TAC TTT GCT GAC ACC ACC AGC TAC CTC ATT GGC CGC Thr Gly Phe Ile Tyr Phe Ala Asp Thr Thr Ser Tyr Leu Ile Gly Arg 575 580 585	2199
CAG AAA ATT GAT GGC ACG GAG AGA GAG ACT ATC CTG AAG GAT GGC ATC Gln Lys Ile Asp Gly Thr Glu Arg Glu Thr Ile Leu Lys Asp Gly Ile 590 595 600	2247
CAC AAT GTG GAG GGC GTA GCC GTG GAC TGG ATG GGA GAC AAT CTT TAC His Asn Val Glu Gly Val Ala Val Asp Trp Met Gly Asp Asn Leu Tyr 605 610 615	2295
TGG ACT GAT GAT GGC CCC AAG AAG ACC ATT AGT GTG GCC AGG CTG GAG Trp Thr Asp Asp Gly Pro Lys Lys Thr Ile Ser Val Ala Arg Leu Glu 620 625 630	2343
AAA GCC GCT CAG ACC CGG AAG ACT CTA ATT GAG GGC AAG ATG ACA CAC Lys Ala Ala Gln Thr Arg Lys Thr Leu Ile Glu Gly Lys Met Thr His 635 640 645 650	2391
CCC AGG GCC ATT GTA GTG GAT CCA CTC AAT GGG TGG ATG TAC TGG ACA Pro Arg Ala Ile Val Val Asp Pro Leu Asn Gly Trp Met Tyr Trp Thr 655 660 665	2439
GAC TGG GAG GAG GAC CCC AAG GAC AGT CGG CGA GGG CGG CTC GAG AGG Asp Trp Glu Glu Asp Pro Lys Asp Ser Arg Arg Gly Arg Leu Glu Arg 670 675 680	2487

FIG. 6a

8449-178

(SHEET / 4 OF 57 )

GCT TGG ATG GAC GGC TCA CAC CGA GAT ATC TTT GTC ACC TCC AAG ACA Ala Trp Met Asp Gly Ser His Arg Asp Ile Phe Val Thr Ser Lys Thr 685 690 695	2535
GTG CTT TGG CCC AAT GGG CTA AGC CTG GAT ATC CCA GCC GGA CGC CTC Val Leu Trp Pro Asn Gly Leu Ser Leu Asp Ile Pro Ala Gly Arg Leu 700 705 710	2583
TAC TGG GTG GAT GCC TTC TAT GAC CGA ATT GAG ACC ATA CTG CTC AAT Tyr Trp Val Asp Ala Phe Tyr Asp Arg Ile Glu Thr Ile Leu Leu Asn 715 720 725 730	2631
GGC ACA GAC CGG AAG ATT GTA TAT GAG GGT CCT GAA CTG AAT CAT GCC Gly Thr Asp Arg Lys Ile Val Tyr Glu Gly Pro Glu Leu Asn His Ala 735 740 745	2679
TTC GGC CTG TGT CAC CAT GGC AAC TAC CTC TTT TGG ACC GAG TAC CGG Phe Gly Leu Cys His His Gly Asn Tyr Leu Phe Trp Thr Glu Tyr Arg 750 755 760	2727
AGC GGC AGC GTC TAC CGC TTG GAA CGG GGC GTG GCA GGC GCA CCG CCC Ser Gly Ser Val Tyr Arg Leu Glu Arg Gly Val Ala Gly Ala Pro Pro 765 770 775	2775
ACT GTG ACC CTT CTG CGC AGC GAG AGA CCG CCT ATC TTT GAG ATC CGA Thr Val Thr Leu Leu Arg Ser Glu Arg Pro Pro Ile Phe Glu Ile Arg 780 785 790	2823
ATG TAC GAC GCG CAC GAG CAG CAA GTG GGT ACC AAC AAA TGC CGG GTA Met Tyr Asp Ala His Glu Gln Gln Val Gly Thr Asn Lys Cys Arg Val 795 800 805 810	2871
AAT AAC GGA GGC TGC AGC AGC CTG TGC CTC GCC ACC CCC GGG AGC CGC Asn Asn Gly Gly Cys Ser Ser Leu Cys Leu Ala Thr Pro Gly Ser Arg 815 820 825	2919
CAG TGT GCC TGT GCC GAG GAC CAG GTG TTG GAC ACA GAT GGT GTC ACC Gln Cys Ala Cys Ala Glu Asp Gln Val Leu Asp Thr Asp Gly Val Thr 830 835 840	2967
TGC TTG GCG AAC CCA TCC TAC GTG CCC CCA CCC CAG TGC CAG CCG GGC Cys Leu Ala Asn Pro Ser Tyr Val Pro Pro Pro Gln Cys Gln Pro Gly 845 850 855	3015
CAG TTT GCC TGT GCC AAC AAC CGC TGC ATC CAG GAG CGC TGG AAG TGT Gln Phe Ala Cys Ala Asn Asn Arg Cys Ile Gln Glu Arg Trp Lys Cys 860 865 870	3063
GAC GGA GAC AAC GAC TGT CTG GAC AAC AGC GAT GAG GCC CCA GCA CTG Asp Gly Asp Asn Asp Cys Leu Asp Asn Ser Asp Glu Ala Pro Ala Leu 875 880 885 890	3111
TGC CAT CAA CAC ACC TGT CCC TCG GAC CGA TTC AAG TGT GAG AAC AAC Cys His Gln His Thr Cys Pro Ser Asp Arg Phe Lys Cys Glu Asn Asn 895 900 905	3159
CGG TGT ATC CCC AAC CGC TGG CTC TGT GAT GGG GAT AAT GAT TGT GGC Arg Cys Ile Pro Asn Arg Trp Leu Cys Asp Gly Asp Asn Asp Cys Gly 910 915 920	3207

FIG. 6a

8449-178

(SHEET / 5 OF 57 )

AAC AGC GAG GAC GAA TCC AAT GCC ACG TGC TCA GCC CGC ACC TGT CCA Asn Ser Glu Asp Glu Ser Asn Ala Thr Cys Ser Ala Arg Thr Cys Pro 925 930 935	3255
CCC AAC CAG TTC TCC TGT GCC AGT GGC CGA TGC ATT CCT ATC TCA TGG Pro Asn Gln Phe Ser Cys Ala Ser Gly Arg Cys Ile Pro Ile Ser Trp 940 945 950	3303
ACC TGT GAT CTG GAT GAT GAC TGT GGG GAC CGG TCC GAT GAG TCA GCC Thr Cys Asp Leu Asp Asp Asp Cys Gly Asp Arg Ser Asp Glu Ser Ala 955 960 965 970	3351
TCA TGC GCC TAC CCC ACC TGC TTC CCC CTG ACT CAA TTT ACC TGC AAC Ser Cys Ala Tyr Pro Thr Cys Phe Pro Leu Thr Gln Phe Thr Cys Asn 975 980 985	3399
AAT GGC AGA TGT ATT AAC ATC AAC TGG CGG TGT GAC AAC GAC AAT GAC Asn Gly Arg Cys Ile Asn Ile Asn Trp Arg Cys Asp Asn Asp Asn Asp 990 995 1000	3447
TGT GGG GAC AAC AGC GAC GAA GCC GGC TGC AGT CAC TCC TGC TCC AGT Cys Gly Asp Asn Ser Asp Glu Ala Gly Cys Ser His Ser Cys Ser Ser 1005 1010 1015	3495
ACC CAG TTC AAG TGC AAC AGT GGC AGA TGC ATC CCC GAG CAC TGG ACG Thr Gln Phe Lys Cys Asn Ser Gly Arg Cys Ile Pro Glu His Trp Thr 1020 1025 1030	3543
TGT GAT GGG GAC AAT GAT TGT GGG GAC TAC AGC GAC GAG ACA CAC GCC Cys Asp Gly Asp Asn Asp Cys Gly Asp Tyr Ser Asp Glu Thr His Ala 1035 1040 1045 1050	3591
AAC TGT ACC AAC CAG GCT ACA AGA CCT CCT GGT GGC TGC CAC TCG GAT Asn Cys Thr Asn Gln Ala Thr Arg Pro Pro Gly Gly Cys His Ser Asp 1055 1060 1065	3639
GAG TTC CAG TGC CCG CTA GAT GGC CTG TGC ATC CCC CTG AGG TGG CGC Glu Phe Gln Cys Pro Leu Asp Gly Leu Cys Ile Pro Leu Arg Trp Arg 1070 1075 1080	3687
TGC GAC GGG GAC ACC GAC TGC ATG GAT TCC AGC GAT GAG AAG AGC TGT Cys Asp Gly Asp Thr Asp Cys Met Asp Ser Ser Asp Glu Lys Ser Cys 1085 1090 1095	3735
GAG GGC GTG ACC CAT GTT TGT GAC CCG AAT GTC AAG TTT GGC TGC AAG Glu Gly Val Thr His Val Cys Asp Pro Asn Val Lys Phe Gly Cys Lys 1100 1105 1110	3783
GAC TCC GCC CGG TGC ATC AGC AAG GCG TGG GTG TGT GAT GGC GAC AGC Asp Ser Ala Arg Cys Ile Ser Lys Ala Trp Val Cys Asp Gly Asp Ser 1115 1120 1125 1130	3831
GAC TGT GAA GAT AAC TCC GAC GAG GAG AAC TGT GAG GCC CTG GCC TGC Asp Cys Glu Asp Asn Ser Asp Glu Glu Asn Cys Glu Ala Leu Ala Cys 1135 1140 1145	3879
AGG CCA CCC TCC CAT CCC TGC GCC AAC AAC ACC TCT GTC TGC CTG CCT Arg Pro Pro Ser His Pro Cys Ala Asn Asn Thr Ser Val Cys Leu Pro 1150 1155 1160	3927

FIG. 6a

8449-178

(SHEET /6 OF 57)

CCT GAC AAG CTG TGC GAC GGC AAG GAT GAC TGT GGA GAC GGC TCG GAT Pro Asp Lys Leu Cys Asp Gly Lys Asp Asp Cys Gly Asp Gly Ser Asp 1165 1170 1175	3975
GAG GGC GAG CTC TGT GAC CAG TGT TCT CTG AAT AAT GGT GGC TGT AGT Glu Gly Glu Leu Cys Asp Gln Cys Ser Leu Asn Asn Gly Gly Cys Ser 1180 1185 1190	4023
CAC AAC TGC TCA GTG GCC CCT GGT GAA GGC ATC GTG TGC TCT TGC CCT His Asn Cys Ser Val Ala Pro Gly Glu Gly Ile Val Cys Ser Cys Pro 1195 1200 1205 1210	4071
CTG GGC ATG GAG CTG GGC TCT GAC AAC CAC ACC TGC CAG ATC CAG AGC Leu Gly Met Glu Leu Gly Ser Asp Asn His Thr Cys Gln Ile Gln Ser 1215 1220 1225	4119
TAC TGT GCC AAG CAC CTC AAA TGC AGC CAG AAG TGT GAC CAG AAC AAG Tyr Cys Ala Lys His Leu Lys Cys Ser Gln Lys Cys Asp Gln Asn Lys 1230 1235 1240	4167
TTC AGT GTG AAG TGC TCC TGC TAC GAG GGC TGG GTC TTG GAG CCT GAC Phe Ser Val Lys Cys Ser Cys Tyr Glu Gly Trp Val Leu Glu Pro Asp 1245 1250 1255	4215
GGG GAA ACG TGC CGC AGT CTG GAT CCC TTC AAA CTG TTC ATC ATC TTC Gly Glu Thr Cys Arg Ser Leu Asp Pro Phe Lys Leu Phe Ile Ile Phe 1260 1265 1270	4263
TCC AAC CGC CAC GAG ATC AGG CGC ATT GAC CTT CAC AAG GGG GAC TAC Ser Asn Arg His Glu Ile Arg Arg Ile Asp Leu His Lys Gly Asp Tyr 1275 1280 1285 1290	4311
AGC GTC CTA GTG CCT GGC CTG CGC AAC ACT ATT GCC CTG GAC TTC CAC Ser Val Leu Val Pro Gly Leu Arg Asn Thr Ile Ala Leu Asp Phe His 1295 1300 1305	4359
CTC AGC CAG AGT GCC CTC TAC TGG ACC GAC GCG GTA GAG GAC AAG ATC Leu Ser Gln Ser Ala Leu Tyr Trp Thr Asp Ala Val Glu Asp Lys Ile 1310 1315 1320	4407
TAC CGT GGG AAA CTC CTG GAC AAC GGA GCC CTG ACC AGC TTT GAG GTG Tyr Arg Gly Lys Leu Leu Asp Asn Gly Ala Leu Thr Ser Phe Glu Val 1325 1330 1335	4455
GTG ATT CAG TAT GGC TTG GCC ACA CCA GAG GGC CTG GCT GTA GAT TGG Val Ile Gln Tyr Gly Leu Ala Thr Pro Glu Gly Leu Ala Val Asp Trp 1340 1345 1350	4503
ATT GCA GGC AAC ATC TAC TGG GTG GAG AGC AAC CTG GAC CAG ATC GAA Ile Ala Gly Asn Ile Tyr Trp Val Glu Ser Asn Leu Asp Gln Ile Glu 1355 1360 1365 1370	4551
GTG GCC AAG CTG GAC GGA ACC CTC CGA ACC ACT CTG CTG GCG GGT GAC Val Ala Lys Leu Asp Gly Thr Leu Arg Thr Thr Leu Leu Ala Gly Asp 1375 1380 1385	4599
ATT GAG CAC CCG AGG GCC ATC GCT CTG GAC CCT CGG GAT GGG ATT CTG Ile Glu His Pro Arg Ala Ile Ala Leu Asp Pro Arg Asp Gly Ile Leu 1390 1395 1400	4647

FIG. 6a

8449-178

(SHEET / 7 OF 57)

TTT TGG ACA GAC TGG GAT GCC AGC CTG CCA CGA ATC GAG GCT GCA TCC Phe Trp Thr Asp Trp Asp Ala Ser Leu Pro Arg Ile Glu Ala Ala Ser 1405 1410 1415	4695
ATG AGT GGA GCT GGC CGC CGA ACC ATC CAC CGG GAG ACA GGC TCT GGG Met Ser Gly Ala Gly Arg Arg Thr Ile His Arg Glu Thr Gly Ser Gly 1420 1425 1430	4743
GGC TGC GCC AAT GGG CTC ACC GTG GAT TAC CTG GAG AAG CGC ATC CTC Gly Cys Ala Asn Gly Leu Thr Val Asp Tyr Leu Glu Lys Arg Ile Leu 1435 1440 1445 1450	4791
TGG ATT GAT GCT AGG TCA GAT GCC ATC TAT TCA GCC CGG TAT GAC GGC Trp Ile Asp Ala Arg Ser Asp Ala Ile Tyr Ser Ala Arg Tyr Asp Gly 1455 1460 1465	4839
TCC GGC CAC ATG GAG GTG CTT CGG GGA CAC GAG TTC CTG TCA CAC CCA Ser Gly His Met Glu Val Leu Arg Gly His Glu Phe Leu Ser His Pro 1470 1475 1480	4887
TTT GCC GTG ACA CTG TAC GGT GGG GAG GTG TAC TGG ACC GAC TGG CGA Phe Ala Val Thr Leu Tyr Gly Gly Glu Val Tyr Trp Thr Asp Trp Arg 1485 1490 1495	4935
ACA AAT ACA CTG GCT AAG GCC AAC AAG TGG ACT GGC CAC AAC GTC ACC Thr Asn Thr Leu Ala Lys Ala Asn Lys Trp Thr Gly His Asn Val Thr 1500 1505 1510	4983
GTG GTA CAG AGG ACC AAC ACC CAG CCC TTC GAC CTG CAG GTG TAT CAC Val Val Gln Arg Thr Asn Thr Gln Pro Phe Asp Leu Gln Val Tyr His 1515 1520 1525 1530	5031
CCT TCC CGG CAG CCC ATG GCT CCA AAC CCA TGT GAG GCC AAT GGC GGC Pro Ser Arg Gln Pro Met Ala Pro Asn Pro Cys Glu Ala Asn Gly Gly 1535 1540 1545	5079
CGG GGC CCC TGT TCC CAT CTG TGC CTC ATC AAC TAC AAC CGG ACC GTC Arg Gly Pro Cys Ser His Leu Cys Leu Ile Asn Tyr Asn Arg Thr Val 1550 1555 1560	5127
TCC TGG GCC TGT CCC CAC CTC ATG AAG CTG CAC AAG GAC AAC ACC ACC Ser Trp Ala Cys Pro His Leu Met Lys Leu His Lys Asp Asn Thr Thr 1565 1570 1575	5175
TGC TAT GAG TTT AAG AAG TTC CTG CTG TAC GCA CGT CAG ATG GAG ATC Cys Tyr Glu Phe Lys Lys Phe Leu Leu Tyr Ala Arg Gln Met Glu Ile 1580 1585 1590	5223
CGG GGC GTG GAC CTG GAT GCC CCG TAC TAC AAT TAT ATC ATC TCC TTC Arg Gly Val Asp Leu Asp Ala Pro Tyr Tyr Asn Tyr Ile Ile Ser Phe 1595 1600 1605 1610	5271
ACG GTG CCT GAT ATC GAC AAT GTC ACG GTG CTG GAC TAT GAT GCC CGA Thr Val Pro Asp Ile Asp Asn Val Thr Val Leu Asp Tyr Asp Ala Arg 1615 1620 1625	5319
GAG CAG CGA GTT TAC TGG TCT GAT GTG CGG ACT CAA GCC ATC AAA AGG Glu Gln Arg Val Tyr Trp Ser Asp Val Arg Thr Gln Ala Ile Lys Arg 1630 1635 1640	5367

FIG. 6a

8449-178

(SHEET 18 OF 57)

GCA TTT ATC AAC GGC ACT GGC GTG GAG ACC GTT GTC TCT GCA GAC TTG Ala Phe Ile Asn Gly Thr Gly Val Glu Thr Val Val Ser Ala Asp Leu 1645 1650 1655	5415
CCC AAC GCC CAC GGG CTG GCT GTG GAC TGG GTC TCC CGA AAT CTG TTT Pro Asn Ala His Gly Leu Ala Val Asp Trp Val Ser Arg Asn Leu Phe 1660 1665 1670	5463
TGG ACA AGT TAC GAC ACC AAC AAG AAG CAG ATT AAC GTG GCC CGG CTG Trp Thr Ser Tyr Asp Thr Asn Lys Lys Gln Ile Asn Val Ala Arg Leu 1675 1680 1685 1690	5511
GAC GGC TCC TTC AAG AAT GCG GTG GTG CAG GGC CTG GAG CAG CCC CAC Asp Gly Ser Phe Lys Asn Ala Val Val Gln Gly Leu Glu Gln Pro His 1695 1700 1705	5559
GGC CTG GTC GTC CAC CCG CTT CGT GGC AAG CTC TAC TGG ACT GAT GGG Gly Leu Val Val His Pro Leu Arg Gly Lys Leu Tyr Trp Thr Asp Gly 1710 1715 1720	5607
GAC AAC ATC AGC ATG GCC AAC ATG GAT GGG AGC AAC CAC ACT CTG CTC Asp Asn Ile Ser Met Ala Asn Met Asp Gly Ser Asn His Thr Leu Leu 1725 1730 1735	5655
TTC AGT GGC CAG AAG GGC CCT GTG GGG TTG GCC ATT GAC TTC CCT GAG Phe Ser Gly Gln Lys Gly Pro Val Gly Leu Ala Ile Asp Phe Pro Glu 1740 1745 1750	5703
AGC AAA CTC TAC TGG ATC AGC TCT GGG AAC CAC ACA ATC AAC CGT TGC Ser Lys Leu Tyr Trp Ile Ser Ser Gly Asn His Thr Ile Asn Arg Cys 1755 1760 1765 1770	5751
AAT CTG GAT GGG AGC GAG CTG GAG GTC ATC GAC ACC ATG CGG AGC CAG Asn Leu Asp Gly Ser Glu Leu Glu Val Ile Asp Thr Met Arg Ser Gln 1775 1780 1785	5799
CTG GGC AAG GCC ACT GCC CTG GCC ATC ATG GGG GAC AAG CTG TGG TGG Leu Gly Lys Ala Thr Ala Leu Ala Ile Met Gly Asp Lys Leu Trp Trp 1790 1795 1800	5847
GCA GAT CAG GTG TCA GAG AAG ATG GGC ACG TGC AAC AAA GCC GAT GGC Ala Asp Gln Val Ser Glu Lys Met Gly Thr Cys Asn Lys Ala Asp Gly 1805 1810 1815	5895
TCT GGG TCC GTG GTG CTG CGG AAC AGT ACC ACG TTG GTT ATG CAC ATG Ser Gly Ser Val Val Leu Arg Asn Ser Thr Thr Leu Val Met His Met 1820 1825 1830	5943
AAG GTG TAT GAC GAG AGC ATC CAG CTA GAG CAT GAG GGC ACC AAC CCC Lys Val Tyr Asp Glu Ser Ile Gln Leu Glu His Glu Gly Thr Asn Pro 1835 1840 1845 1850	5991
TGC AGT GTC AAC AAC GGA GAC TGT TCC CAG CTC TGC CTG CCA ACA TCA Cys Ser Val Asn Asn Gly Asp Cys Ser Gln Leu Cys Leu Pro Thr Ser 1855 1860 1865	6039
GAG ACG ACT CGC TCC TGT ATG TGT ACA GCC GGT TAC AGC CTC CGG AGC Glu Thr Thr Arg Ser Cys Met Cys Thr Ala Gly Tyr Ser Leu Arg Ser 1870 1875 1880	6087

FIG. 6a

8449-178

(SHEET 14 OF 57)

GGA CAG CAG GCC TGT GAG GGT GTG GGC TCT TTT CTC CTG TAC TCT GTA Gly Gln Gln Ala Cys Glu Gly Val Gly Ser Phe Leu Leu Tyr Ser Val 1885 1890 1895	6135
CAT GAG GGA ATT CGG GGG ATT CCA CTA GAT CCC AAT GAC AAG TCG GAT His Glu Gly Ile Arg Gly Ile Pro Leu Asp Pro Asn Asp Lys Ser Asp 1900 1905 1910	6183
GCC CTG GTC CCA GTG TCC GGA ACT TCA CTG GCT GTC GGA ATC GAC TTC Ala Leu Val Pro Val Ser Gly Thr Ser Leu Ala Val Gly Ile Asp Phe 1915 1920 1925 1930	6231
CAT GCC GAA AAT GAC ACT ATT TAT TGG GTG GAT ATG GGC CTA AGC ACC His Ala Glu Asn Asp Thr Ile Tyr Trp Val Asp Met Gly Leu Ser Thr 1935 1940 1945	6279
ATC AGC AGG GCC AAG CGT GAC CAG ACA TGG CGA GAG GAT GTG GTG ACC Ile Ser Arg Ala Lys Arg Asp Gln Thr Trp Arg Glu Asp Val Val Thr 1950 1955 1960	6327
AAC GGT ATT GGC CGT GTG GAG GGC ATC GCC GTG GAC TGG ATC GCA GGC Asn Gly Ile Gly Arg Val Glu Gly Ile Ala Val Asp Trp Ile Ala Gly 1965 1970 1975	6375
AAC ATA TAC TGG ACG GAC CAG GGC TTC GAT GTC ATC GAG GTT GCC CGG Asn Ile Tyr Trp Thr Asp Gln Gly Phe Asp Val Ile Glu Val Ala Arg 1980 1985 1990	6423
CTC AAT GGC TCT TTT CGT TAT GTG GTC ATT TCC CAG GGT CTG GAC AAG Leu Asn Gly Ser Phe Arg Tyr Val Val Ile Ser Gln Gly Leu Asp Lys 1995 2000 2005 2010	6471
CCT CGG GCC ATC ACT GTC CAC CCA GAG AAG GGG TAC TTG TTC TGG ACC Pro Arg Ala Ile Thr Val His Pro Glu Lys Gly Tyr Leu Phe Trp Thr 2015 2020 2025	6519
GAG TGG GGT CAT TAC CCA CGT ATT GAG CGG TCT CGC CTT GAT GGC ACA Glu Trp Gly His Tyr Pro Arg Ile Glu Arg Ser Arg Leu Asp Gly Thr 2030 2035 2040	6567
GAG AGA GTG GTG TTG GTT AAT GTC AGC ATC AGC TGG CCC AAT GGC ATC Glu Arg Val Val Leu Val Asn Val Ser Ile Ser Trp Pro Asn Gly Ile 2045 2050 2055	6615
TCA GTA GAC TAT CAG GGC GGC AAG CTC TAC TGG TGT GAT GCT CGG ATG Ser Val Asp Tyr Gln Gly Gly Lys Leu Tyr Trp Cys Asp Ala Arg Met 2060 2065 2070	6663
GAC AAG ATC GAG CGC ATC GAC CTG GAA ACG GGC GAG AAC CGG GAG GTG Asp Lys Ile Glu Arg Ile Asp Leu Glu Thr Gly Glu Asn Arg Glu Val 2075 2080 2085 2090	6711
GTC CTG TCC AGC AAT AAC ATG GAT ATG TTC TCC GTG TCC GTG TTT GAG Val Leu Ser Ser Asn Asn Met Asp Met Phe Ser Val Ser Val Phe Glu 2095 2100 2105	6759
GAC TTC ATC TAC TGG AGT GAC AGA ACT CAC GCC AAT GGC TCC ATC AAG Asp Phe Ile Tyr Trp Ser Asp Arg Thr His Ala Asn Gly Ser Ile Lys 2110 2115 2120	6807

FIG. 6a

8449-178

(SHEET 26 OF 57)

CGC GGC TGC AAA GAC AAT GCT ACA GAC TCC GTG CCT CTG AGG ACA GGC Arg Gly Cys Lys Asp Asn Ala Thr Asp Ser Val Pro Leu Arg Thr Gly 2125 2130 2135	6855
ATT GGT GTT CAG CTT AAA GAC ATC AAG GTC TTC AAC AGG GAC AGG CAG Ile Gly Val Gln Leu Lys Asp Ile Lys Val Phe Asn Arg Asp Arg Gln 2140 2145 2150	6903
AAG GGT ACC AAT GTG TGC GCG GTA GCC AAC GGC GGG TGC CAG CAG CTC Lys Gly Thr Asn Val Cys Ala Val Ala Asn Gly Gly Cys Gln Gln Leu 2155 2160 2165 2170	6951
TGC TTG TAT CGG GGT GGC GGA CAG CGA GCC TGT GCC TGT GCC CAC GGC Cys Leu Tyr Arg Gly Gly Gly Gln Arg Ala Cys Ala Cys Ala His Gly 2175 2180 2185	6999
ATG CTG GCA GAA GAC GGG GCC TCA TGC CGA GAG TAC GCT GGC TAC CTG Met Leu Ala Glu Asp Gly Ala Ser Cys Arg Glu Tyr Ala Gly Tyr Leu 2190 2195 2200	7047
CTC TAC TCA GAG CGG ACC ATC CTC AAG AGC ATC CAC CTG TCG GAT GAG Leu Tyr Ser Glu Arg Thr Ile Leu Lys Ser Ile His Leu Ser Asp Glu 2205 2210 2215	7095
CGT AAC CTC AAC GCA CCG GTG CAG CCC TTT GAA GAC CCC GAG CAC ATG Arg Asn Leu Asn Ala Pro Val Gln Pro Phe Glu Asp Pro Glu His Met 2220 2225 2230	7143
AAA AAT GTC ATC GCC CTG GCC TTT GAC TAC CGA GCA GGC ACC TCC CCG Lys Asn Val Ile Ala Leu Ala Phe Asp Tyr Arg Ala Gly Thr Ser Pro 2235 2240 2245 2250	7191
GGG ACC CCT AAC CGC ATC TTC TTC AGT GAC ATC CAC TTT GGG AAC ATC Gly Thr Pro Asn Arg Ile Phe Phe Ser Asp Ile His Phe Gly Asn Ile 2255 2260 2265	7239
CAG CAG ATC AAT GAC GAT GGC TCG GGC AGG ACC ACC ATC GTG GAA AAT Gln Gln Ile Asn Asp Asp Gly Ser Gly Arg Thr Thr Ile Val Glu Asn 2270 2275 2280	7287
GTG GGC TCT GTG GAA GGC CTG GCC TAT CAC CGT GGC TGG GAC ACA CTG Val Gly Ser Val Glu Gly Leu Ala Tyr His Arg Gly Trp Asp Thr Leu 2285 2290 2295	7335
TAC TGG ACA AGC TAC ACC ACA TCC ACC ATC ACC CGC CAC ACC GTG GAC Tyr Trp Thr Ser Tyr Thr Thr Ser Thr Ile Thr Arg His Thr Val Asp 2300 2305 2310	7383
CAG ACT CGC CCA GGG GCC TTC GAG AGG GAG ACA GTC ATC ACC ATG TCC Gln Thr Arg Pro Gly Ala Phe Glu Arg Glu Thr Val Ile Thr Met Ser 2315 2320 2325 2330	7431
GGA GAC GAC CAC CCG AGA GCC TTT GTG CTG GAT GAG TGC CAG AAC CTG Gly Asp Asp His Pro Arg Ala Phe Val Leu Asp Glu Cys Gln Asn Leu 2335 2340 2345	7479
ATG TTC TGG ACC AAT TGG AAC GAG CTC CAT CCA AGC ATC ATG CGG GCA Met Phe Trp Thr Asn Trp Asn Glu Leu His Pro Ser Ile Met Arg Ala 2350 2355 2360	7527

FIG. 6a

8449-178

(SHEET 21 OF 51)

GCC CTA TCC GGA GCC AAC GTC CTG ACC CTC ATT GAG AAG GAC ATC CGC Ala Leu Ser Gly Ala Asn Val Leu Thr Leu Ile Glu Lys Asp Ile Arg 2365 2370 2375	7575
ACG CCC AAT GGG TTG GCC ATC GAC CAC CGG GCG GAG AAG CTG TAC TTC Thr Pro Asn Gly Leu Ala Ile Asp His Arg Ala Glu Lys Leu Tyr Phe 2380 2385 2390	7623
TCG GAT GCC ACC TTG GAC AAG ATC GAG CGC TGC GAG TAC GAC GGC TCC Ser Asp Ala Thr Leu Asp Lys Ile Glu Arg Cys Glu Tyr Asp Gly Ser 2395 2400 2405 2410	7671
CAC CGC TAT GTG ATC CTA AAG TCG GAG CCC GTC CAC CCC TTT GGG TTG His Arg Tyr Val Ile Leu Lys Ser Glu Pro Val His Pro Phe Gly Leu 2415 2420 2425	7719
GCG GTG TAC GGA GAG CAC ATT TTC TGG ACT GAC TGG GTG CGG CGG GCT Ala Val Tyr Gly Glu His Ile Phe Trp Thr Asp Trp Val Arg Arg Ala 2430 2435 2440	7767
GTG CAG CGA GCC AAC AAG TAT GTG GGC AGC GAC ATG AAG CTG CTT CGG Val Gln Arg Ala Asn Lys Tyr Val Gly Ser Asp Met Lys Leu Leu Arg 2445 2450 2455	7815
GTG GAC ATT CCC CAG CAA CCC ATG GGC ATC ATC GCC GTG GCC AAT GAC Val Asp Ile Pro Gln Gln Pro Met Gly Ile Ile Ala Val Ala Asn Asp 2460 2465 2470	7863
ACC AAC AGC TGT GAA CTC TCC CCC TGC CGT ATC AAC AAT GGA GGC TGC Thr Asn Ser Cys Glu Leu Ser Pro Cys Arg Ile Asn Asn Gly Gly Cys 2475 2480 2485 2490	7911
CAG GAT CTG TGT CTG CTC ACC CAC CAA GGC CAC GTC AAC TGT TCC TGT Gln Asp Leu Cys Leu Leu Thr His Gln Gly His Val Asn Cys Ser Cys 2495 2500 2505	7959
CGA GGG GGC CGG ATC CTC CAG GAG GAC TTC ACC TGC CGG GCT GTG AAC Arg Gly Gly Arg Ile Leu Gln Glu Asp Phe Thr Cys Arg Ala Val Asn 2510 2515 2520	8007
TCC TCT TGT CGG GCA CAA GAT GAG TTT GAG TGT GCC AAT GGG GAA TGT Ser Ser Cys Arg Ala Gln Asp Glu Phe Glu Cys Ala Asn Gly Glu Cys 2525 2530 2535	8055
ATC AGC TTC AGC CTC ACC TGT GAT GGC GTC TCC CAC TGC AAG GAC AAG Ile Ser Phe Ser Leu Thr Cys Asp Gly Val Ser His Cys Lys Asp Lys 2540 2545 2550	8103
TCC GAT GAG AAG CCC TCC TAC TGC AAC TCA CGC CGC TGC AAG AAG ACT Ser Asp Glu Lys Pro Ser Tyr Cys Asn Ser Arg Arg Cys Lys Lys Thr 2555 2560 2565 2570	8151
TTC CGC CAG TGT AAC AAT GGC CGC TGT GTA TCC AAC ATG CTG TGG TGC Phe Arg Gln Cys Asn Asn Gly Arg Cys Val Ser Asn Met Leu Trp Cys 2575 2580 2585	8199
AAT GGG GTG GAT TAC TGT GGG GAT GGC TCT GAT GAG ATA CCT TGC AAC Asn Gly Val Asp Tyr Cys Gly Asp Gly Ser Asp Glu Ile Pro Cys Asn 2590 2595 2600	8247

FIG. 6a

8449-178

(SHEET 22 OF 51)

AAG ACT GCC TGT GGT GTG GGT GAG TTC CGC TGC CGG GAT GGG TCC TGC Lys Thr Ala Cys Gly Val Gly Glu Phe Arg Cys Arg Asp Gly Ser Cys 2605 2610 2615	8295
ATC GGG AAC TCC AGT CGC TGC AAC CAG TTT GTG GAT TGT GAG GAT GCC Ile Gly Asn Ser Ser Arg Cys Asn Gln Phe Val Asp Cys Glu Asp Ala 2620 2625 2630	8343
TCG GAT GAG ATG AAT TGC AGT GCC ACA GAC TGC AGC AGC TAT TTC CGC Ser Asp Glu Met Asn Cys Ser Ala Thr Asp Cys Ser Ser Tyr Phe Arg 2635 2640 2645 2650	8391
CTG GGC GTG AAA GGT GTC CTC TTC CAG CCG TGC GAG CGG ACA TCC CTG Leu Gly Val Lys Gly Val Leu Phe Gln Pro Cys Glu Arg Thr Ser Leu 2655 2660 2665	8439
TGC TAC GCA CCT AGC TGG GTG TGT GAT GGC GCC AAC GAC TGT GGA GAC Cys Tyr Ala Pro Ser Trp Val Cys Asp Gly Ala Asn Asp Cys Gly Asp 2670 2675 2680	8487
TAC AGC GAT GAA CGT GAC TGT CCA GGT GTG AAG CGC CCT AGG TGC CCG Tyr Ser Asp Glu Arg Asp Cys Pro Gly Val Lys Arg Pro Arg Cys Pro 2685 2690 2695	8535
CTC AAT TAC TTT GCC TGC CCC AGC GGG CGC TGT ATC CCC ATG AGC TGG Leu Asn Tyr Phe Ala Cys Pro Ser Gly Arg Cys Ile Pro Met Ser Trp 2700 2705 2710	8583
ACG TGT GAC AAG GAG GAT GAC TGT GAG AAC GGC GAG GAT GAG ACC CAC Thr Cys Asp Lys Glu Asp Asp Cys Glu Asn Gly Glu Asp Glu Thr His 2715 2720 2725 2730	8631
TGC AAC AAG TTC TGC TCA GAG GCA CAG TTC GAG TGC CAG AAC CAC CGG Cys Asn Lys Phe Cys Ser Glu Ala Gln Phe Glu Cys Gln Asn His Arg 2735 2740 2745	8679
TGT ATC TCC AAG CAG TGG CTG TGT GAC GGT AGC GAT GAT TGC GGG GAT Cys Ile Ser Lys Gln Trp Leu Cys Asp Gly Ser Asp Asp Cys Gly Asp 2750 2755 2760	8727
GGC TCC GAT GAG GCA GCT CAC TGT GAA GGC AAG ACA TGT GGC CCC TCC Gly Ser Asp Glu Ala Ala His Cys Glu Gly Lys Thr Cys Gly Pro Ser 2765 2770 2775	8775
TCC TTC TCC TGT CCC GGC ACC CAC GTG TGT GTC CCT GAG CGC TGG CTC Ser Phe Ser Cys Pro Gly Thr His Val Cys Val Pro Glu Arg Trp Leu 2780 2785 2790	8823
TGT GAT GGC GAC AAG GAC TGT ACC GAT GGC GCG GAT GAG AGT GTC ACT Cys Asp Gly Asp Lys Asp Cys Thr Asp Gly Ala Asp Glu Ser Val Thr 2795 2800 2805 2810	8871
GCT GGC TGC CTG TAC AAC AGC ACC TGT GAT GAC CGT GAG TTC ATG TGC Ala Gly Cys Leu Tyr Asn Ser Thr Cys Asp Asp Arg Glu Phe Met Cys 2815 2820 2825	8919
CAG AAC CGC TTG TGT ATT CCC AAG CAT TTC GTG TGC GAC CAT GAC CGT Gln Asn Arg Leu Cys Ile Pro Lys His Phe Val Cys Asp His Asp Arg 2830 2835 2840	8967

FIG. 6a

8449-178

(SHEET 23 OF 51)

GAC Asp	TGT Cys	GCT Ala	GAT Asp	GGC Gly	TCT Ser	GAT Asp	GAA Glu	TCC Ser	CCT Pro	GAG Glu	TGT Cys	GAG Glu	TAC Tyr	CCA Pro	ACC Thr	9015
2845						2850				2855						
TGC Cys	GGG Gly	CCC Pro	AAT Asn	GAA Glu	TTC Phe	CGC Arg	TGT Cys	GCC Ala	AAT Asn	GGG Gly	CGT Arg	TGT Cys	CTG Leu	AGC Ser	TCC Ser	9063
2860						2865				2870						
CGT Arg	CAG Gln	TGG Trp	GAA Glu	TGT Cys	GAT Asp	GGG Gly	GAG Glu	AAT Asn	GAC Asp	TGT Cys	CAC His	GAC Asp	CAC His	AGC Ser	GAT Asp	9111
2875					2880				2885						2890	
GAG Glu	GCT Ala	CCC Pro	AAG Lys	AAC Asn	CCA Pro	CAC His	TGC Cys	ACC Thr	AGC Ser	CCA Pro	GAG Glu	CAC His	AAA Lys	TGC Cys	AAT Asn	9159
			2895					2900					2905			
GCC Ala	TCA Ser	TCA Ser	CAG Gln	TTC Phe	CTG Leu	TGC Cys	AGC Ser	AGC Ser	GGG Gly	CGC Arg	TGC Cys	GTG Val	GCT Ala	GAG Glu	GCG Ala	9207
			2910					2915					2920			
TTG Leu	CTC Leu	TGC Cys	AAC Asn	GGC Gly	CAG Gln	GAC Asp	GAC Asp	TGT Cys	GGG Gly	GAC Asp	GGT Gly	TCA Ser	GAC Asp	GAA Glu	CGC Arg	9255
		2925					2930					2935				
GGG Gly	TGC Cys	CAT His	GTC Val	AAC Asn	GAG Glu	TGT Cys	CTC Leu	AGC Ser	CGC Arg	AAG Lys	CTC Leu	AGT Ser	GGC Gly	TGC Cys	AGT Ser	9303
	2940					2945				2950						
CAG Gln	GAC Asp	TGC Cys	GAG Glu	GAC Asp	CTC Leu	AAG Lys	ATA Ile	GGC Gly	TTT Phe	AAG Lys	TGC Cys	CGC Arg	TGT Cys	CGC Arg	CCG Pro	9351
2955					2960				2965						2970	
GGC Gly	TTC Phe	CGG Arg	CTA Leu	AAG Lys	GAC Asp	GAT Asp	GGC Gly	AGG Arg	ACC Thr	TGT Cys	GCC Ala	GAC Asp	CTG Leu	GAT Asp	GAG Glu	9399
			2975					2980					2985			
TGC Cys	AGC Ser	ACC Thr	ACC Thr	TTC Phe	CCC Pro	TGC Cys	AGC Ser	CAG Gln	CTC Leu	TGC Cys	ATC Ile	AAC Asn	ACC Thr	CAC His	GGA Gly	9447
		2990						2995				3000				
AGT Ser	TAC Tyr	AAG Lys	TGT Cys	CTG Leu	TGT Cys	GTG Val	GAG Glu	GGC Gly	TAT Tyr	GCA Ala	CCC Pro	CGT Arg	GGC Gly	GGT Gly	GAC Asp	9495
		3005				3010					3015					
CCC Pro	CAC His	AGC Ser	TGC Cys	AAA Lys	GCT Ala	GTG Val	ACC Thr	GAT Asp	GAG Glu	GAG Glu	CCA Pro	TTT Phe	CTC Leu	ATC Ile	TTT Phe	9543
	3020					3025					3030					
GCC Ala	AAC Asn	CGG Arg	TAC Tyr	TAC Tyr	CTG Leu	CGG Arg	AAG Lys	CTC Leu	AAC Asn	CTG Leu	GAC Asp	GGC Gly	TCC Ser	AAC Asn	TAC Tyr	9591
3035					3040				3045						3050	
ACA Thr	CTG Leu	CTT Leu	AAG Lys	CAG Gln	GGC Gly	CTG Leu	AAC Asn	AAT Asn	GCG Ala	GTC Val	GCC Ala	TTG Leu	GCA Ala	TTT Phe	GAC Asp	9639
			3055				3060					3065				
TAC Tyr	CGA Arg	GAG Glu	CAG Gln	ATG Met	ATC Ile	TAC Tyr	TGG Trp	ACG Thr	GGC Gly	GTG Val	ACC Thr	ACC Thr	CAG Gln	GGC Gly	AGC Ser	9687
		3070					3075					3080				

FIG. 6a

8449-178

(SHEET 24 OF 57)

ATG ATT CGC AGG ATG CAC CTC AAC GGC AGC AAC GTG CAG GTT CTG CAC Met Ile Arg Arg Met His Leu Asn Gly Ser Asn Val Gln Val Leu His 3085 3090 3095	9735
CGG ACG GGC CTT AGT AAC CCA GAT GGG CTC GCT GTG GAC TGG GTG GGT Arg Thr Gly Leu Ser Asn Pro Asp Gly Leu Ala Val Asp Trp Val Gly 3100 3105 3110	9783
GGC AAC CTG TAC TGG TGT GAC AAG GGC AGA GAT ACC ATT GAG GTG TCC Gly Asn Leu Tyr Trp Cys Asp Lys Gly Arg Asp Thr Ile Glu Val Ser 3115 3120 3125 3130	9831
AAG CTT AAC GGG GCC TAT CGG ACA GTG CTG GTC AGC TCT GGC CTC CGG Lys Leu Asn Gly Ala Tyr Arg Thr Val Leu Val Ser Ser Gly Leu Arg 3135 3140 3145	9879
GAG CCC AGA GCT CTG GTA GTG GAT GTA CAG AAT GGG TAC CTG TAC TGG Glu Pro Arg Ala Leu Val Val Asp Val Gln Asn Gly Tyr Leu Tyr Trp 3150 3155 3160	9927
ACA GAC TGG GGT GAC CAC TCA CTG ATC GGC CGG ATT GGC ATG GAT GGA Thr Asp Trp Gly Asp His Ser Leu Ile Gly Arg Ile Gly Met Asp Gly 3165 3170 3175	9975
TCT GGC CGC AGC ATC ATC GTG GAC ACT AAG ATC ACA TGG CCC AAT GGC Ser Gly Arg Ser Ile Ile Val Asp Thr Lys Ile Thr Trp Pro Asn Gly 3180 3185 3190	10023
CTG ACC GTG GAC TAC GTC ACG GAA CGC ATC TAC TGG GCT GAC GCC CGT Leu Thr Val Asp Tyr Val Thr Glu Arg Ile Tyr Trp Ala Asp Ala Arg 3195 3200 3205 3210	10071
GAG GAC TAC ATC GAG TTC GCC AGC CTG GAT GGC TCC AAC CGT CAC GTT Glu Asp Tyr Ile Glu Phe Ala Ser Leu Asp Gly Ser Asn Arg His Val 3215 3220 3225	10119
GTG CTG AGC CAA GAC ATC CCA CAC ATC TTT GCG CTG ACC CTA TTT GAA Val Leu Ser Gln Asp Ile Pro His Ile Phe Ala Leu Thr Leu Phe Glu 3230 3235 3240	10167
GAC TAC GTC TAC TGG ACA GAC TGG GAA ACG AAG TCC ATC AAC CGG GCC Asp Tyr Val Tyr Trp Thr Asp Trp Glu Thr Lys Ser Ile Asn Arg Ala 3245 3250 3255	10215
CAC AAG ACC ACG GGT GCC AAC AAA ACA CTC CTC ATC AGC ACC CTG CAC His Lys Thr Thr Gly Ala Asn Lys Thr Leu Leu Ile Ser Thr Leu His 3260 3265 3270	10263
CGG CCC ATG GAC TTA CAT GTA TTC CAC GCC CTG CGC CAG CCA GAT GTG Arg Pro Met Asp Leu His Val Phe His Ala Leu Arg Gln Pro Asp Val 3275 3280 3285 3290	10311
CCC AAT CAC CCC TGC AAA GTC AAC AAT GGT GGC TGC AGC AAC CTG TGC Pro Asn His Pro Cys Lys Val Asn Asn Gly Gly Cys Ser Asn Leu Cys 3295 3300 3305	10359
CTG CTG TCC CCT GGG GGT GGT CAC AAG TGC GCC TGC CCC ACC AAC TTC Leu Leu Ser Pro Gly Gly Gly His Lys Cys Ala Cys Pro Thr Asn Phe 3310 3315 3320	10407

FIG. 6a

8449-178

(SHEET 25 OF 57)

TAT CTG GGT GGC GAT GGC CGT ACC TGT GTG TCC AAC TGC ACA GCA AGC Tyr Leu Gly Gly Asp Gly Arg Thr Cys Val Ser Asn Cys Thr Ala Ser 3325 3330 3335	10455
CAG TTT GTG TGC AAA AAT GAC AAG TGC ATC CCC TTC TGG TGG AAG TGT Gln Phe Val Cys Lys Asn Asp Lys Cys Ile Pro Phe Trp Trp Lys Cys 3340 3345 3350	10503
GAC ACG GAG GAC GAC TGT GGG GAT CAC TCA GAC GAG CCT CCA GAC TGT Asp Thr Glu Asp Asp Cys Gly Asp His Ser Asp Glu Pro Pro Asp Cys 3355 3360 3365 3370	10551
CCC GAG TTC AAG TGC CGC CCA GGC CAG TTC CAG TGC TCC ACC GGC ATC Pro Glu Phe Lys Cys Arg Pro Gly Gln Phe Gln Cys Ser Thr Gly Ile 3375 3380 3385	10599
TGC ACC AAC CCT GCC TTC ATC TGT GAT GGG GAC AAT GAC TGC CAA GAC Cys Thr Asn Pro Ala Phe Ile Cys Asp Gly Asp Asn Asp Cys Gln Asp 3390 3395 3400	10647
AAT AGT GAC GAG GCC AAT TGC GAC ATT CAC GTC TGC TTG CCC AGC CAA Asn Ser Asp Glu Ala Asn Cys Asp Ile His Val Cys Leu Pro Ser Gln 3405 3410 3415	10695
TTC AAG TGC ACC AAC ACC AAC CGC TGC ATT CCT GGC ATC TTC CGT TGC Phe Lys Cys Thr Asn Thr Asn Arg Cys Ile Pro Gly Ile Phe Arg Cys 3420 3425 3430	10743
AAT GGG CAG GAC AAC TGC GGG GAC GGC GAG GAT GAG CGG GAT TGC CCT Asn Gly Gln Asp Asn Cys Gly Asp Gly Glu Asp Glu Arg Asp Cys Pro 3435 3440 3445 3450	10791
GAG GTG ACC TGC GCC CCC AAC CAG TTC CAG TGC TCC ATC ACC AAG CGC Glu Val Thr Cys Ala Pro Asn Gln Phe Gln Cys Ser Ile Thr Lys Arg 3455 3460 3465	10839
TGC ATC CCT CGC GTC TGG GTC TGT GAC AGG GAT AAT CAC TGT GTG GAC Cys Ile Pro Arg Val Trp Val Cys Asp Arg Asp Asn His Cys Val Asp 3470 3475 3480	10887
GGC AGT GAT GAG CCT GCC AAC TGT ACC CAA ATG ACC TGT GGA GTG GAT Gly Ser Asp Glu Pro Ala Asn Cys Thr Gln Met Thr Cys Gly Val Asp 3485 3490 3495	10935
GAG TTC CGC TGC AAG GAT TCT GGC CGC TGC ATC CCC GCG CGC TGG AAG Glu Phe Arg Cys Lys Asp Ser Gly Arg Cys Ile Pro Ala Arg Trp Lys 3500 3505 3510	10983
TGT GAC GGA GAA GAT GAC TGT GGG GAT GGT TCA GAT GAG CCC AAG GAA Cys Asp Gly Glu Asp Asp Cys Gly Asp Gly Ser Asp Glu Pro Lys Glu 3515 3520 3525 3530	11031
GAG TGT GAT GAG CGC ACC TGT GAG CCA TAC CAG TTC CGC TGC AAA AAC Glu Cys Asp Glu Arg Thr Cys Glu Pro Tyr Gln Phe Arg Cys Lys Asn 3535 3540 3545	11079
AAC CGC TGT GTC CCA GGC CGT TGG CAA TGT GAC TAC GAC AAC GAC TGC Asn Arg Cys Val Pro Gly Arg Trp Gln Cys Asp Tyr Asp Asn Asp Cys 3550 3555 3560	11127

FIG. 6a

8449-178

(SHEET 26 OF 57)

GGA GAT AAC TCG GAC GAG GAG AGC TGC ACA CCT CGG CCC TGC TCT GAG Gly Asp Asn Ser Asp Glu Glu Ser Cys Thr Pro Arg Pro Cys Ser Glu 3565 3570 3575	11175
AGT GAG TTT TTC TGT GCC AAT GGC CGC TGC ATC GCT GGG CGC TGG AAG Ser Glu Phe Phe Cys Ala Asn Gly Arg Cys Ile Ala Gly Arg Trp Lys 3580 3585 3590	11223
TGT GAT GGG GAC CAT GAC TGT GCC GAC GGC TCA GAC GAG AAA GAC TGC Cys Asp Gly Asp His Asp Cys Ala Asp Gly Ser Asp Glu Lys Asp Cys 3595 3600 3605 3610	11271
ACC CCC CGC TGT GAT ATG GAC CAG TTC CAG TGC AAG AGT GGC CAC TGC Thr Pro Arg Cys Asp Met Asp Gln Phe Gln Cys Lys Ser Gly His Cys 3615 3620 3625	11319
ATC CCC CTG CGC TGG CCG TGT GAC GCG GAT GCT GAC TGT ATG GAC GGC Ile Pro Leu Arg Trp Pro Cys Asp Ala Asp Ala Asp Cys Met Asp Gly 3630 3635 3640	11367
AGT GAC GAG GAA GCC TGT GGC ACT GGG GTG AGG ACC TGC CCA TTG GAT Ser Asp Glu Glu Ala Cys Gly Thr Gly Val Arg Thr Cys Pro Leu Asp 3645 3650 3655	11415
GAG TTT CAA TGT AAC AAC ACC TTG TGC AAG CCG CTG GCC TGG AAG TGT Glu Phe Gln Cys Asn Asn Thr Leu Cys Lys Pro Leu Ala Trp Lys Cys 3660 3665 3670	11463
GAT GGA GAG GAC GAC TGT GGG GAC AAC TCA GAT GAG AAC CCC GAG GAA Asp Gly Glu Asp Asp Cys Gly Asp Asn Ser Asp Glu Asn Pro Glu Glu 3675 3680 3685 3690	11511
TGC GCC CGG TTC ATC TGC CCT CCC AAC CGG CCT TTC CGC TGC AAG AAT Cys Ala Arg Phe Ile Cys Pro Pro Asn Arg Pro Phe Arg Cys Lys Asn 3695 3700 3705	11559
GAC CGA GTC TGC CTG TGG ATT GGG CGC CAG TGT GAT GGC GTG GAC AAC Asp Arg Val Cys Leu Trp Ile Gly Arg Gln Cys Asp Gly Val Asp Asn 3710 3715 3720	11607
TGT GGA GAT GGG ACT GAC GAG GAG GAC TGT GAG CCC CCC ACG GCC CAG Cys Gly Asp Gly Thr Asp Glu Glu Asp Cys Glu Pro Pro Thr Ala Gln 3725 3730 3735	11655
AAC CCC CAC TGC AAA GAC AAG AAG GAG TTC CTG TGC CGA AAC CAG CGC Asn Pro His Cys Lys Asp Lys Lys Glu Phe Leu Cys Arg Asn Gln Arg 3740 3745 3750	11703
TGT CTA TCA TCC TCC CTG CGC TGT AAC ATG TTC GAT GAC TGC GGC GAT Cys Leu Ser Ser Ser Leu Arg Cys Asn Met Phe Asp Asp Cys Gly Asp 3755 3760 3765 3770	11751
GGC TCC GAT GAA GAA GAT TGC AGC ATC GAC CCC AAG CTG ACC AGC TGT Gly Ser Asp Glu Glu Asp Cys Ser Ile Asp Pro Lys Leu Thr Ser Cys 3775 3780 3785	11799
GCC ACC AAT GCC AGC ATG TGT GGG GAC GAA GCT CGT TGT GTG CGC ACT Ala Thr Asn Ala Ser Met Cys Gly Asp Glu Ala Arg Cys Val Arg Thr 3790 3795 3800	11847

FIG. 6a

8449-178

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GAG AAA GCT GCC TAC TGT GCC TGC CGC TCG GGC TTC CAT ACT GTG CCG Glu Lys Ala Ala Tyr Cys Ala Cys Arg Ser Gly Phe His Thr Val Pro 3805 3810 3815	11895
GGC CAG CCC GGA TGC CAG GAC ATC AAC GAG TGC CTG CGC TTT GGT ACC Gly Gln Pro Gly Cys Gln Asp Ile Asn Glu Cys Leu Arg Phe Gly Thr 3820 3825 3830	11943
TGC TCT CAG CTC TGG AAC AAA CCC AAG GGA GGC CAC CTC TGC AGC TGT Cys Ser Gln Leu Trp Asn Lys Pro Lys Gly Gly His Leu Cys Ser Cys 3835 3840 3845 3850	11991
GCC CGC AAC TTC ATG AAG ACA CAC AAC ACC TGC AAA GCT GAA GGC TCC Ala Arg Asn Phe Met Lys Thr His Asn Thr Cys Lys Ala Glu Gly Ser 3855 3860 3865	12039
GAG TAC CAG GTG CTA TAC ATC GCG GAT GAC AAC GAG ATC CGC AGC TTG Glu Tyr Gln Val Leu Tyr Ile Ala Asp Asp Asn Glu Ile Arg Ser Leu 3870 3875 3880	12087
TTC CCG GGC CAC CCC CAC TCA GCC TAC GAG CAG ACA TTC CAG GGC GAT Phe Pro Gly His Pro His Ser Ala Tyr Glu Gln Thr Phe Gln Gly Asp 3885 3890 3895	12135
GAG AGT GTC CGC ATA GAT GCC ATG GAT GTC CAT GTC AAG GCC GGC CGT Glu Ser Val Arg Ile Asp Ala Met Asp Val His Val Lys Ala Gly Arg 3900 3905 3910	12183
GTC TAC TGG ACT AAC TGG CAC ACG GGC ACA ATC TCC TAC AGG AGC CTG Val Tyr Trp Thr Asn Trp His Thr Gly Thr Ile Ser Tyr Arg Ser Leu 3915 3920 3925 3930	12231
CCC CCT GCC GCC CCT CCT ACC ACT TCC AAC CGC CAC CGG AGG CAG ATC Pro Pro Ala Ala Pro Pro Thr Thr Ser Asn Arg His Arg Arg Gln Ile 3935 3940 3945	12279
GAC CGG GGT GTC ACC CAC CTC AAT ATT TCA GGG CTG AAG ATG CCG AGG Asp Arg Gly Val Thr His Leu Asn Ile Ser Gly Leu Lys Met Pro Arg 3950 3955 3960	12327
GGT ATC GCT ATC GAC TGG GTG GCC GGG AAT GTG TAC TGG ACC GAT TCC Gly Ile Ala Ile Asp Trp Val Ala Gly Asn Val Tyr Trp Thr Asp Ser 3965 3970 3975	12375
GGC CGA GAC GTG ATT GAG GTG GCG CAA ATG AAG GGC GAG AAC CGC AAG Gly Arg Asp Val Ile Glu Val Ala Gln Met Lys Gly Glu Asn Arg Lys 3980 3985 3990	12423
ACG CTC ATC TCG GGC ATG ATT GAT GAG CCC CAT GCC ATC GTG GTG GAC Thr Leu Ile Ser Gly Met Ile Asp Glu Pro His Ala Ile Val Val Asp 3995 4000 4005 4010	12471
CCT CTG AGG GGC ACC ATG TAC TGG TCA GAC TGG GGG AAC CAC CCC AAG Pro Leu Arg Gly Thr Met Tyr Trp Ser Asp Trp Gly Asn His Pro Lys 4015 4020 4025	12519
ATT GAA ACA GCA GCG ATG GAT GGC ACC CTT CGG GAG ACT CTC GTG CAA Ile Glu Thr Ala Ala Met Asp Gly Thr Leu Arg Glu Thr Leu Val Gln 4030 4035 4040	12567

FIG. 6a

8449-178

(SHEET 28 OF 57)

GAC AAC ATT CAG TGG CCT ACA GGG CTG GCT GTG GAC TAT CAC AAT GAA Asp Asn Ile Gln Trp Pro Thr Gly Leu Ala Val Asp Tyr His Asn Glu 4045 4050 4055	12615
CGG CTC TAC TGG GCA GAT GCC AAG CTT TCG GTC ATC GGC AGC ATC CGG Arg Leu Tyr Trp Ala Asp Ala Lys Leu Ser Val Ile Gly Ser Ile Arg 4060 4065 4070	12663
CTC AAC GGC ACT GAC CCC ATT GTG GCT GCT GAC AGC AAA CGA GGC CTA Leu Asn Gly Thr Asp Pro Ile Val Ala Ala Asp Ser Lys Arg Gly Leu 4075 4080 4085 4090	12711
AGT CAC CCC TTC AGC ATC GAT GTG TTT GAA GAC TAC ATC TAC GGA GTC Ser His Pro Phe Ser Ile Asp Val Phe Glu Asp Tyr Ile Tyr Gly Val 4095 4100 4105	12759
ACT TAC ATC AAT AAT CGT GTC TTC AAG ATC CAC AAG TTT GGA CAC AGC Thr Tyr Ile Asn Asn Arg Val Phe Lys Ile His Lys Phe Gly His Ser 4110 4115 4120	12807
CCC TTG TAC AAC CTA ACT GGG GGC CTG AGC CAT GCC TCT GAT GTA GTC Pro Leu Tyr Asn Leu Thr Gly Gly Leu Ser His Ala Ser Asp Val Val 4125 4130 4135	12855
CTT TAC CAT CAA CAC AAG CAG CCT GAA GTG ACC AAC CCC TGT GAC CGC Leu Tyr His Gln His Lys Gln Pro Glu Val Thr Asn Pro Cys Asp Arg 4140 4145 4150	12903
AAG AAA TGC GAA TGG CTG TGT CTG CTG AGC CCC AGC GGG CCT GTC TGC Lys Lys Cys Glu Trp Leu Cys Leu Leu Ser Pro Ser Gly Pro Val Cys 4155 4160 4165 4170	12951
ACC TGT CCC AAT GGA AAG AGG CTG GAT AAT GGC ACC TGT GTG CCT GTG Thr Cys Pro Asn Gly Lys Arg Leu Asp Asn Gly Thr Cys Val Pro Val 4175 4180 4185	12999
CCC TCT CCA ACA CCC CCT CCA GAT GCC CCT AGG CCT GGA ACC TGC ACT Pro Ser Pro Thr Pro Pro Pro Asp Ala Pro Arg Pro Gly Thr Cys Thr 4190 4195 4200	13047
CTG CAG TGC TTC AAT GGT GGT AGT TGT TTC CTC AAC GCT CGG AGG CAG Leu Gln Cys Phe Asn Gly Gly Ser Cys Phe Leu Asn Ala Arg Arg Gln 4205 4210 4215	13095
CCC AAG TGC CGT TGC CAG CCC CGT TAC ACA GGC GAT AAG TGT GAG CTG Pro Lys Cys Arg Cys Gln Pro Arg Tyr Thr Gly Asp Lys Cys Glu Leu 4220 4225 4230	13143
GAT CAG TGC TGG GAA TAC TGT CAC AAC GGA GGC ACC TGT GCG GCT TCC Asp Gln Cys Trp Glu Tyr Cys His Asn Gly Gly Thr Cys Ala Ala Ser 4235 4240 4245 4250	13191
CCA TCT GGC ATG CCC ACG TGC CGC TGT CCC ACT GGC TTC ACG GGC CCC Pro Ser Gly Met Pro Thr Cys Arg Cys Pro Thr Gly Phe Thr Gly Pro 4255 4260 4265	13239
AAA TGC ACC GCA CAG GTG TGT GCA GGC TAC TGC TCT AAC AAC AGC ACC Lys Cys Thr Ala Gln Val Cys Ala Gly Tyr Cys Ser Asn Asn Ser Thr 4270 4275 4280	13287

FIG. 6a

8449-178

(SHEET 24 OF 57)

TGC ACC GTC AAC CAG GGC AAC CAG CCC CAG TGC CGA TGT CTA CCT GGC Cys Thr Val Asn Gln Gly Asn Gln Pro Gln Cys Arg Cys Leu Pro Gly	13335
4285 4290 4295	
TTC CTG GGC GAC CGT TGC CAG TAC CGG CAG TGC TCT GGC TTC TGT GAG Phe Leu Gly Asp Arg Cys Gln Tyr Arg Gln Cys Ser Gly Phe Cys Glu	13383
4300 4305 4310	
AAC TTT GGC ACC TGT CAG ATG GCT GCT GAT GGC TCC CGA CAA TGT CGC Asn Phe Gly Thr Cys Gln Met Ala Ala Asp Gly Ser Arg Gln Cys Arg	13431
4315 4320 4325 4330	
TGC ACC GTC TAC TTT GAG GGA CCA AGG TGT GAG GTG AAC AAG TGT AGT Cys Thr Val Tyr Phe Glu Gly Pro Arg Cys Glu Val Asn Lys Cys Ser	13479
4335 4340 4345	
CGC TGT CTC CAA GGC GCC TGT GTG GTC AAT AAG CAG ACC GGA GAT GTC Arg Cys Leu Gln Gly Ala Cys Val Val Asn Lys Gln Thr Gly Asp Val	13527
4350 4355 4360	
ACA TGC AAC TGC ACT GAT GGC CGG GTA GCC CCC AGT TGT CTC ACC TGC Thr Cys Asn Cys Thr Asp Gly Arg Val Ala Pro Ser Cys Leu Thr Cys	13575
4365 4370 4375	
ATC GAT CAC TGT AGC AAT GGT GGC TCC TGC ACC ATG AAC AGC AAG ATG Ile Asp His Cys Ser Asn Gly Gly Ser Cys Thr Met Asn Ser Lys Met	13623
4380 4385 4390	
ATG CCT GAG TGC CAG TGC CCG CCC CAT ATG ACA GGA CCC CGG TGC CAG Met Pro Glu Cys Gln Cys Pro Pro His Met Thr Gly Pro Arg Cys Gln	13671
4395 4400 4405 4410	
GAG CAG GTT GTT AGT CAG CAA CAG CCT GGG CAT ATG GCC TCC ATC CTG Glu Gln Val Val Ser Gln Gln Gln Pro Gly His Met Ala Ser Ile Leu	13719
4415 4420 4425	
ATC CCT CTG CTG CTG CTT CTC CTG CTG CTT CTG GTG GCT GGC GTG GTG Ile Pro Leu Leu Leu Leu Leu Leu Leu Leu Val Ala Gly Val Val	13767
4430 4435 4440	
TTC TGG TAT AAG CGG CGA GTC CGA GGG GCT AAG GGC TTC CAG CAC CAG Phe Trp Tyr Lys Arg Arg Val Arg Gly Ala Lys Gly Phe Gln His Gln	13815
4445 4450 4455	
CGG ATG ACC AAT GGG GCC ATG AAT GTG GAA ATT GGA AAC CCT ACC TAC Arg Met Thr Asn Gly Ala Met Asn Val Glu Ile Gly Asn Pro Thr Tyr	13863
4460 4465 4470	
AAG ATG TAT GAA GGT GGA GAG CCC GAT GAT GTC GGG GGC CTA CTG GAT Lys Met Tyr Glu Gly Gly Glu Pro Asp Asp Val Gly Gly Leu Leu Asp	13911
4475 4480 4485 4490	
GCT GAT TTT GCC CTT GAC CCT GAC AAG CCT ACC AAC TTC ACC AAC CCA Ala Asp Phe Ala Leu Asp Pro Asp Lys Pro Thr Asn Phe Thr Asn Pro	13959
4495 4500 4505	
GTG TAT GCC ACG CTC TAC ATG GGG GGC CAC GGC AGC CGC CAT TCC CTG Val Tyr Ala Thr Leu Tyr Met Gly Gly His Gly Ser Arg His Ser Leu	14007
4510 4515 4520	

FIG. 6a

8449-178

(SHEET 30 OF 57)

GCC AGC ACG GAC GAG AAG CGA GAA CTG CTG GGC CGG GGA CCT GAA GAC 14055  
Ala Ser Thr Asp Glu Lys Arg Glu Leu Leu Gly Arg Gly Pro Glu Asp  
4525 4530 4535

GAG ATA GGA GAT CCC TTG GCA TAGGGCCCTG CCCCACGGA TGTCCCCAGA AAGC 14110  
CCCCTGCCAC ATGAGTCTTT CAATGAACCC CCTCCCCAGC CGGCCCTTCT CCGGCCCTGC 14170  
Glu Ile Gly Asp Pro Leu Ala  
4540 4545

CGGGTGTACA AATGTAAAAA TGAAGGAATT ACTTTTATA TGTGAGCGAG CAAGCGAGCA 14230  
AGCACAGTAT TATCTCTTTG CATTTCCTTC CTGCCTGCTC CTCAGTATCC CCCCCATGCT 14290  
GCCTTGAGGG GGCAGGGGAGG GCTTTGTGGC TCAAAGGTAT GAAGGAGTCC ACATGTTCCC 14350  
TACCGAGCAT ACCCCTGGAA GCCTGGCGGC ACGGCCTCCC CACCACGCCT GTGCAAGACA 14410  
CTCAACGGGG CTCCGTGTCC CAGCTTTCCT TTCCTTGGCT CTCTGGGGTT AGTTCAGGGG 14470  
AGGTGGAGTC CTCTGCTGAC CCTGTCTGGA AGATTTGGCT CTAGCTGAGG AAGGAGTCTT 14530  
TTAGTTGAGG GAAGTCACCC CAAACCCAG CTCCCCTTT CAGGGGCACC TCTCAGATGG 14590  
CCATGCTCAG TATCCCTTCC AGACAGGCC TCCCCTCTCT AGCGCCCCCT CTGTGGCTCC 14650  
TAGGGCTGAA CACATTCTTT GGTAAGTGTG CCCCAGCCT CCCATCCCC TGAGGGCCAG 14710  
GAAGAGTCGG GGCACACCAA GGAAGGGCAA GCGGGCAGCC CCATTTTGGG GACGTGAACG 14770  
TTTAAATAAT TTTTGCTGAA TTCCTTTACA ACTAAATAAC ACAGATATTG TTATAAATAA 14830  
AATTGTAAAA AAAAAAAAAA

FIG. 6a

8449-178

(SHEET 3, OF 5)

Met	Leu	Thr	Pro	Pro	Leu	Leu	Leu	Leu	Val	Pro	Leu	Leu	Ser	Ala	Leu
1				5					10					15	
Val	Ser	Gly	Ala	Thr	Met	Asp	Ala	Pro	Lys	Thr	Cys	Ser	Pro	Lys	Gln
			20					25					30		
Phe	Ala	Cys	Arg	Asp	Gln	Ile	Thr	Cys	Ile	Ser	Lys	Gly	Trp	Arg	Cys
		35					40					45			
Asp	Gly	Glu	Arg	Asp	Cys	Pro	Asp	Gly	Ser	Asp	Glu	Ala	Pro	Glu	Ile
	50					55					60				
Cys	Pro	Gln	Ser	Lys	Ala	Gln	Arg	Cys	Pro	Pro	Asn	Glu	His	Ser	Cys
	65				70					75					80
Leu	Gly	Thr	Glu	Leu	Cys	Val	Pro	Met	Ser	Arg	Leu	Cys	Asn	Gly	Ile
				85					90					95	
Gln	Asp	Cys	Met	Asp	Gly	Ser	Asp	Glu	Gly	Ala	His	Cys	Arg	Glu	Leu
			100					105						110	
Arg	Ala	Asn	Cys	Ser	Arg	Met	Gly	Cys	Gln	His	His	Cys	Val	Pro	Thr
		115					120					125			
Pro	Ser	Gly	Pro	Thr	Cys	Tyr	Cys	Asn	Ser	Ser	Phe	Gln	Leu	Glu	Ala
	130					135					140				
Asp	Gly	Lys	Thr	Cys	Lys	Asp	Phe	Asp	Glu	Cys	Ser	Val	Tyr	Gly	Thr
	145				150					155					160
Cys	Ser	Gln	Leu	Cys	Thr	Asn	Thr	Asp	Gly	Ser	Phe	Thr	Cys	Gly	Cys
				165					170					175	
Val	Glu	Gly	Tyr	Leu	Leu	Gln	Pro	Asp	Asn	Arg	Ser	Cys	Lys	Ala	Lys
			180					185					190		
Asn	Glu	Pro	Val	Asp	Arg	Pro	Pro	Val	Leu	Leu	Ile	Ala	Asn	Ser	Gln
		195					200					205			
Asn	Ile	Leu	Ala	Thr	Tyr	Leu	Ser	Gly	Ala	Gln	Val	Ser	Thr	Ile	Thr
	210					215					220				
Pro	Thr	Ser	Thr	Arg	Gln	Thr	Thr	Ala	Met	Asp	Phe	Ser	Tyr	Ala	Asn
	225				230					235					240
Glu	Thr	Val	Cys	Trp	Val	His	Val	Gly	Asp	Ser	Ala	Ala	Gln	Thr	Gln
				245					250					255	
Leu	Lys	Cys	Ala	Arg	Met	Pro	Gly	Leu	Lys	Gly	Phe	Val	Asp	Glu	His
			260					265					270		
Thr	Ile	Asn	Ile	Ser	Leu	Ser	Leu	His	His	Val	Glu	Gln	Met	Ala	Ile
		275					280					285			
Asp	Trp	Leu	Thr	Gly	Asn	Phe	Tyr	Phe	Val	Asp	Asp	Ile	Asp	Asp	Arg
	290					295				300					
Ile	Phe	Val	Cys	Asn	Arg	Asn	Gly	Asp	Thr	Cys	Val	Thr	Leu	Leu	Asp
	305				310					315					320
Leu	Glu	Leu	Tyr	Asn	Pro	Lys	Gly	Ile	Ala	Leu	Asp	Pro	Ala	Met	Gly
				325					330					335	
Lys	Val	Phe	Phe	Thr	Asp	Tyr	Gly	Gln	Ile	Pro	Lys	Val	Glu	Arg	Cys
		340					345						350		
Asp	Met	Asp	Gly	Gln	Asn	Arg	Thr	Lys	Leu	Val	Asp	Ser	Lys	Ile	Val
	355						360					365			
Phe	Pro	His	Gly	Ile	Thr	Leu	Asp	Leu	Val	Ser	Arg	Leu	Val	Tyr	Trp
	370					375					380				
Ala	Asp	Ala	Tyr	Leu	Asp	Tyr	Ile	Glu	Val	Val	Asp	Tyr	Glu	Gly	Lys
	385				390					395					400
Gly	Arg	Gln	Thr	Ile	Ile	Gln	Gly	Ile	Leu	Ile	Glu	His	Leu	Tyr	Gly
				405					410					415	
Leu	Thr	Val	Phe	Glu	Asn	Tyr	Leu	Tyr	Ala	Thr	Asn	Ser	Asp	Asn	Ala
			420					425					430		
Asn	Thr	Gln	Gln	Lys	Thr	Ser	Val	Ile	Arg	Val	Asn	Arg	Phe	Asn	Ser
		435					440					445			
Thr	Glu	Tyr	Gln	Val	Val	Thr	Arg	Val	Asp	Lys	Gly	Gly	Ala	Leu	His
	450					455									460

FIG. 6b

8449-178

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Ile	Tyr	His	Gln	Arg	Arg	Gln	Pro	Arg	Val	Arg	Ser	His	Ala	Cys	Glu	465	470	475	480
Asn	Asp	Gln	Tyr	Gly	Lys	Pro	Gly	Gly	Cys	Ser	Asp	Ile	Cys	Leu	Leu	485	490	495	
Ala	Asn	Ser	His	Lys	Ala	Arg	Thr	Cys	Arg	Cys	Arg	Ser	Gly	Phe	Ser	500	505	510	
Leu	Gly	Ser	Asp	Gly	Lys	Ser	Cys	Lys	Lys	Pro	Glu	His	Glu	Leu	Phe	515	520	525	
Leu	Val	Tyr	Gly	Lys	Gly	Arg	Pro	Gly	Ile	Ile	Arg	Gly	Met	Asp	Met	530	535	540	
Gly	Ala	Lys	Val	Pro	Asp	Glu	His	Met	Ile	Pro	Ile	Glu	Asn	Leu	Met	545	550	555	560
Asn	Pro	Arg	Ala	Leu	Asp	Phe	His	Ala	Glu	Thr	Gly	Phe	Ile	Tyr	Phe	565	570	575	
Ala	Asp	Thr	Thr	Ser	Tyr	Leu	Ile	Gly	Arg	Gln	Lys	Ile	Asp	Gly	Thr	580	585	590	
Glu	Arg	Glu	Thr	Ile	Leu	Lys	Asp	Gly	Ile	His	Asn	Val	Glu	Gly	Val	595	600	605	
Ala	Val	Asp	Trp	Met	Gly	Asp	Asn	Leu	Tyr	Trp	Thr	Asp	Asp	Gly	Pro	610	615	620	
Lys	Lys	Thr	Ile	Ser	Val	Ala	Arg	Leu	Glu	Lys	Ala	Ala	Gln	Thr	Arg	625	630	635	640
Lys	Thr	Leu	Ile	Glu	Gly	Lys	Met	Thr	His	Pro	Arg	Ala	Ile	Val	Val	645	650	655	
Asp	Pro	Leu	Asn	Gly	Trp	Met	Tyr	Trp	Thr	Asp	Trp	Glu	Glu	Asp	Pro	660	665	670	
Lys	Asp	Ser	Arg	Arg	Gly	Arg	Leu	Glu	Arg	Ala	Trp	Met	Asp	Gly	Ser	675	680	685	
His	Arg	Asp	Ile	Phe	Val	Thr	Ser	Lys	Thr	Val	Leu	Trp	Pro	Asn	Gly	690	695	700	
Leu	Ser	Leu	Asp	Ile	Pro	Ala	Gly	Arg	Leu	Tyr	Trp	Val	Asp	Ala	Phe	705	710	715	720
Tyr	Asp	Arg	Ile	Glu	Thr	Ile	Leu	Leu	Asn	Gly	Thr	Asp	Arg	Lys	Ile	725	730	735	
Val	Tyr	Glu	Gly	Pro	Glu	Leu	Asn	His	Ala	Phe	Gly	Leu	Cys	His	His	740	745	750	
Gly	Asn	Tyr	Leu	Phe	Trp	Thr	Glu	Tyr	Arg	Ser	Gly	Ser	Val	Tyr	Arg	755	760	765	
Leu	Glu	Arg	Gly	Val	Ala	Gly	Ala	Pro	Pro	Thr	Val	Thr	Leu	Leu	Arg	770	775	780	
Ser	Glu	Arg	Pro	Pro	Ile	Phe	Glu	Ile	Arg	Met	Tyr	Asp	Ala	His	Glu	785	790	795	800
Gln	Gln	Val	Gly	Thr	Asn	Lys	Cys	Arg	Val	Asn	Asn	Gly	Gly	Cys	Ser	805	810	815	
Ser	Leu	Cys	Leu	Ala	Thr	Pro	Gly	Ser	Arg	Gln	Cys	Ala	Cys	Ala	Glu	820	825	830	
Asp	Gln	Val	Leu	Asp	Thr	Asp	Gly	Val	Thr	Cys	Leu	Ala	Asn	Pro	Ser	835	840	845	
Tyr	Val	Pro	Pro	Pro	Gln	Cys	Gln	Pro	Gly	Gln	Phe	Ala	Cys	Ala	Asn	850	855	860	
Asn	Arg	Cys	Ile	Gln	Glu	Arg	Trp	Lys	Cys	Asp	Gly	Asp	Asn	Asp	Cys	865	870	875	880
Leu	Asp	Asn	Ser	Asp	Glu	Ala	Pro	Ala	Leu	Cys	His	Gln	His	Thr	Cys	885	890	895	
Pro	Ser	Asp	Arg	Phe	Lys	Cys	Glu	Asn	Asn	Arg	Cys	Ile	Pro	Asn	Arg	900	905	910	
Trp	Leu	Cys	Asp	Gly	Asp	Asn	Asp	Cys	Gly	Asn	Ser	Glu	Asp	Glu	Ser	915	920	925	

FIG. 6b

Asn	Ala	Thr,	Cys	Ser	Ala	Arg	Thr	Cys	Pro	Pro	Asn	Gln	Phe	Ser	Cys
930						935					940				
Ala	Ser	Gly	Arg	Cys	Ile	Pro	Ile	Ser	Trp	Thr	Cys	Asp	Leu	Asp	Asp
945					950					955					960
Asp	Cys	Gly	Asp	Arg	Ser	Asp	Glu	Ser	Ala	Ser	Cys	Ala	Tyr	Pro	Thr
				965					970					975	
Cys	Phe	Pro	Leu	Thr	Gln	Phe	Thr	Cys	Asn	Asn	Gly	Arg	Cys	Ile	Asn
			980					985					990		
Ile	Asn	Trp	Arg	Cys	Asp	Asn	Asp	Asn	Asp	Cys	Gly	Asp	Asn	Ser	Asp
		995				1000						1005			
Glu	Ala	Gly	Cys	Ser	His	Ser	Cys	Ser	Ser	Thr	Gln	Phe	Lys	Cys	Asn
1010						1015					1020				
Ser	Gly	Arg	Cys	Ile	Pro	Glu	His	Trp	Thr	Cys	Asp	Gly	Asp	Asn	Asp
025				1030						1035					1040
Cys	Gly	Asp	Tyr	Ser	Asp	Glu	Thr	His	Ala	Asn	Cys	Thr	Asn	Gln	Ala
				1045					1050					1055	
Thr	Arg	Pro	Pro	Gly	Gly	Cys	His	Ser	Asp	Glu	Phe	Gln	Cys	Pro	Leu
			1060					1065					1070		
Asp	Gly	Leu	Cys	Ile	Pro	Leu	Arg	Trp	Arg	Cys	Asp	Gly	Asp	Thr	Asp
	1075					1080					1085				
Cys	Met	Asp	Ser	Ser	Asp	Glu	Lys	Ser	Cys	Glu	Gly	Val	Thr	His	Val
1090					1095						1100				
Cys	Asp	Pro	Asn	Val	Lys	Phe	Gly	Cys	Lys	Asp	Ser	Ala	Arg	Cys	Ile
105				1110						1115					1120
Ser	Lys	Ala	Trp	Val	Cys	Asp	Gly	Asp	Ser	Asp	Cys	Glu	Asp	Asn	Ser
			1125					1130						1135	
Asp	Glu	Glu	Asn	Cys	Glu	Ala	Leu	Ala	Cys	Arg	Pro	Pro	Ser	His	Pro
			1140					1145					1150		
Cys	Ala	Asn	Asn	Thr	Ser	Val	Cys	Leu	Pro	Pro	Asp	Lys	Leu	Cys	Asp
	1155					1160					1165				
Gly	Lys	Asp	Asp	Cys	Gly	Asp	Gly	Ser	Asp	Glu	Gly	Glu	Leu	Cys	Asp
1170					1175						1180				
Gln	Cys	Ser	Leu	Asn	Asn	Gly	Gly	Cys	Ser	His	Asn	Cys	Ser	Val	Ala
185				1190						1195					1200
Pro	Gly	Glu	Gly	Ile	Val	Cys	Ser	Cys	Pro	Leu	Gly	Met	Glu	Leu	Gly
			1205						1210					1215	
Ser	Asp	Asn	His	Thr	Cys	Gln	Ile	Gln	Ser	Tyr	Cys	Ala	Lys	His	Leu
		1220				1225						1230			
Lys	Cys	Ser	Gln	Lys	Cys	Asp	Gln	Asn	Lys	Phe	Ser	Val	Lys	Cys	Ser
	1235					1240					1245				
Cys	Tyr	Glu	Gly	Trp	Val	Leu	Glu	Pro	Asp	Gly	Glu	Thr	Cys	Arg	Ser
1250					1255						1260				
Leu	Asp	Pro	Phe	Lys	Leu	Phe	Ile	Ile	Phe	Ser	Asn	Arg	His	Glu	Ile
265				1270					1275						1280
Arg	Arg	Ile	Asp	Leu	His	Lys	Gly	Asp	Tyr	Ser	Val	Leu	Val	Pro	Gly
			1285					1290						1295	
Leu	Arg	Asn	Thr	Ile	Ala	Leu	Asp	Phe	His	Leu	Ser	Gln	Ser	Ala	Leu
		1300				1305						1310			
Tyr	Trp	Thr	Asp	Ala	Val	Glu	Asp	Lys	Ile	Tyr	Arg	Gly	Lys	Leu	Leu
	1315					1320						1325			
Asp	Asn	Gly	Ala	Leu	Thr	Ser	Phe	Glu	Val	Val	Ile	Gln	Tyr	Gly	Leu
1330					1335						1340				
Ala	Thr	Pro	Glu	Gly	Leu	Ala	Val	Asp	Trp	Ile	Ala	Gly	Asn	Ile	Tyr
345				1350					1355						1360
Trp	Val	Glu	Ser	Asn	Leu	Asp	Gln	Ile	Glu	Val	Ala	Lys	Leu	Asp	Gly
			1365					1370					1375		
Thr	Leu	Arg	Thr	Thr	Leu	Leu	Ala	Gly	Asp	Ile	Glu	His	Pro	Arg	Ala
		1380				1385						1390			
Ile	Ala	Leu	Asp	Pro	Arg	Asp	Gly	Ile	Leu	Phe	Trp	Thr	Asp	Trp	Asp

FIG. 6b

8449-178

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1395	1400	1405
Ala Ser Leu Pro Arg Ile Glu	Ala Ala Ser Met Ser Gly Ala Gly Arg	
1410	1415	1420
Arg Thr Ile His Arg Glu Thr Gly Ser Gly Gly Cys Ala Asn Gly Leu		
425	1430	1435
Thr Val Asp Tyr Leu Glu Lys Arg Ile Leu Trp Ile Asp Ala Arg Ser		1440
	1445	1450
Asp Ala Ile Tyr Ser Ala Arg Tyr Asp Gly Ser Gly His Met Glu Val		1455
	1460	1465
Leu Arg Gly His Glu Phe Leu Ser His Pro Phe Ala Val Thr Leu Tyr		1470
	1475	1480
Gly Gly Glu Val Tyr Trp Thr Asp Trp Arg Thr Asn Thr Leu Ala Lys		1485
	1490	1495
Ala Asn Lys Trp Thr Gly His Asn Val Thr Val Val Gln Arg Thr Asn		1500
505	1510	1515
Thr Gln Pro Phe Asp Leu Gln Val Tyr His Pro Ser Arg Gln Pro Met		1520
	1525	1530
Ala Pro Asn Pro Cys Glu Ala Asn Gly Gly Arg Gly Pro Cys Ser His		1535
	1540	1545
Leu Cys Leu Ile Asn Tyr Asn Arg Thr Val Ser Trp Ala Cys Pro His		1550
	1555	1560
Leu Met Lys Leu His Lys Asp Asn Thr Thr Cys Tyr Glu Phe Lys Lys		1565
	1570	1575
Phe Leu Leu Tyr Ala Arg Gln Met Glu Ile Arg Gly Val Asp Leu Asp		1580
585	1590	1595
Ala Pro Tyr Tyr Asn Tyr Ile Ile Ser Phe Thr Val Pro Asp Ile Asp		1600
	1605	1610
Asn Val Thr Val Leu Asp Tyr Asp Ala Arg Glu Gln Arg Val Tyr Trp		1615
	1620	1625
Ser Asp Val Arg Thr Gln Ala Ile Lys Arg Ala Phe Ile Asn Gly Thr		1630
	1635	1640
Gly Val Glu Thr Val Val Ser Ala Asp Leu Pro Asn Ala His Gly Leu		1645
	1650	1655
Ala Val Asp Trp Val Ser Arg Asn Leu Phe Trp Thr Ser Tyr Asp Thr		1660
665	1670	1675
Asn Lys Lys Gln Ile Asn Val Ala Arg Leu Asp Gly Ser Phe Lys Asn		1680
	1685	1690
Ala Val Val Gln Gly Leu Glu Gln Pro His Gly Leu Val Val His Pro		1695
	1700	1705
Leu Arg Gly Lys Leu Tyr Trp Thr Asp Gly Asp Asn Ile Ser Met Ala		1710
	1715	1720
Asn Met Asp Gly Ser Asn His Thr Leu Leu Phe Ser Gly Gln Lys Gly		1725
	1730	1735
Pro Val Gly Leu Ala Ile Asp Phe Pro Glu Ser Lys Leu Tyr Trp Ile		1740
745	1750	1755
Ser Ser Gly Asn His Thr Ile Asn Arg Cys Asn Leu Asp Gly Ser Glu		1760
	1765	1770
Leu Glu Val Ile Asp Thr Met Arg Ser Gln Leu Gly Lys Ala Thr Ala		1775
	1780	1785
Leu Ala Ile Met Gly Asp Lys Leu Trp Trp Ala Asp Gln Val Ser Glu		1790
	1795	1800
Lys Met Gly Thr Cys Asn Lys Ala Asp Gly Ser Gly Ser Val Val Leu		1805
	1810	1815
Arg Asn Ser Thr Thr Leu Val Met His Met Lys Val Tyr Asp Glu Ser		1820
825	1830	1835
Ile Gln Leu Glu His Glu Gly Thr Asn Pro Cys Ser Val Asn Asn Gly		1840
	1845	1850
Asp Cys Ser Gln Leu Cys Leu Pro Thr Ser Glu Thr Thr Arg Ser Cys		1855
	1860	1865
		1870

FIG. 6b

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Met Cys Thr Ala Gly Tyr Ser Leu Arg Ser Gly Gln Gln Ala Cys Glu  
 1875 1880 1885  
 Gly Val Gly Ser Phe Leu Leu Tyr Ser Val His Glu Gly Ile Arg Gly  
 1890 1895 1900  
 Ile Pro Leu Asp Pro Asn Asp Lys Ser Asp Ala Leu Val Pro Val Ser  
 905 1910 1915 1920  
 Gly Thr Ser Leu Ala Val Gly Ile Asp Phe His Ala Glu Asn Asp Thr  
 1925 1930 1935  
 Ile Tyr Trp Val Asp Met Gly Leu Ser Thr Ile Ser Arg Ala Lys Arg  
 1940 1945 1950  
 Asp Gln Thr Trp Arg Glu Asp Val Val Thr Asn Gly Ile Gly Arg Val  
 1955 1960 1965  
 Glu Gly Ile Ala Val Asp Trp Ile Ala Gly Asn Ile Tyr Trp Thr Asp  
 1970 1975 1980  
 Gln Gly Phe Asp Val Ile Glu Val Ala Arg Leu Asn Gly Ser Phe Arg  
 985 1990 1995 2000  
 Tyr Val Val Ile Ser Gln Gly Leu Asp Lys Pro Arg Ala Ile Thr Val  
 2005 2010 2015  
 His Pro Glu Lys Gly Tyr Leu Phe Trp Thr Glu Trp Gly His Tyr Pro  
 2020 2025 2030  
 Arg Ile Glu Arg Ser Arg Leu Asp Gly Thr Glu Arg Val Val Leu Val  
 2035 2040 2045  
 Asn Val Ser Ile Ser Trp Pro Asn Gly Ile Ser Val Asp Tyr Gln Gly  
 2050 2055 2060  
 Gly Lys Leu Tyr Trp Cys Asp Ala Arg Met Asp Lys Ile Glu Arg Ile  
 065 2070 2075 2080  
 Asp Leu Glu Thr Gly Glu Asn Arg Glu Val Val Leu Ser Ser Asn Asn  
 2085 2090 2095  
 Met Asp Met Phe Ser Val Ser Val Phe Glu Asp Phe Ile Tyr Trp Ser  
 2100 2105 2110  
 Asp Arg Thr His Ala Asn Gly Ser Ile Lys Arg Gly Cys Lys Asp Asn  
 2115 2120 2125  
 Ala Thr Asp Ser Val Pro Leu Arg Thr Gly Ile Gly Val Gln Leu Lys  
 2130 2135 2140  
 Asp Ile Lys Val Phe Asn Arg Asp Arg Gln Lys Gly Thr Asn Val Cys  
 145 2150 2155 2160  
 Ala Val Ala Asn Gly Gly Cys Gln Gln Leu Cys Leu Tyr Arg Gly Gly  
 2165 2170 2175  
 Gly Gln Arg Ala Cys Ala Cys Ala His Gly Met Leu Ala Glu Asp Gly  
 2180 2185 2190  
 Ala Ser Cys Arg Glu Tyr Ala Gly Tyr Leu Leu Tyr Ser Glu Arg Thr  
 2195 2200 2205  
 Ile Leu Lys Ser Ile His Leu Ser Asp Glu Arg Asn Leu Asn Ala Pro  
 2210 2215 2220  
 Val Gln Pro Phe Glu Asp Pro Glu His Met Lys Asn Val Ile Ala Leu  
 225 2230 2235 2240  
 Ala Phe Asp Tyr Arg Ala Gly Thr Ser Pro Gly Thr Pro Asn Arg Ile  
 2245 2250 2255  
 Phe Phe Ser Asp Ile His Phe Gly Asn Ile Gln Gln Ile Asn Asp Asp  
 2260 2265 2270  
 Gly Ser Gly Arg Thr Thr Ile Val Glu Asn Val Gly Ser Val Glu Gly  
 2275 2280 2285  
 Leu Ala Tyr His Arg Gly Trp Asp Thr Leu Tyr Trp Thr Ser Tyr Thr  
 2290 2295 2300  
 Thr Ser Thr Ile Thr Arg His Thr Val Asp Gln Thr Arg Pro Gly Ala  
 305 2310 2315 2320  
 Phe Glu Arg Glu Thr Val Ile Thr Met Ser Gly Asp Asp His Pro Arg  
 2325 2330 2335  
 Ala Phe Val Leu Asp Glu Cys Gln Asn Leu Met Phe Trp Thr Asn Trp

FIG. 6b

2340	2345	2350
Asn Glu Leu His Pro Ser Ile Met Arg Ala Ala Leu Ser Gly Ala Asn		
2355	2360	2365
Val Leu Thr Leu Ile Glu Lys Asp Ile Arg Thr Pro Asn Gly Leu Ala		
2370	2375	2380
Ile Asp His Arg Ala Glu Lys Leu Tyr Phe Ser Asp Ala Thr Leu Asp		
385	2390	2395
Lys Ile Glu Arg Cys Glu Tyr Asp Gly Ser His Arg Tyr Val Ile Leu		2400
2405	2410	2415
Lys Ser Glu Pro Val His Pro Phe Gly Leu Ala Val Tyr Gly Glu His		
2420	2425	2430
Ile Phe Trp Thr Asp Trp Val Arg Arg Ala Val Gln Arg Ala Asn Lys		
2435	2440	2445
Tyr Val Gly Ser Asp Met Lys Leu Leu Arg Val Asp Ile Pro Gln Gln		
2450	2455	2460
Pro Met Gly Ile Ile Ala Val Ala Asn Asp Thr Asn Ser Cys Glu Leu		
465	2470	2475
Ser Pro Cys Arg Ile Asn Asn Gly Gly Cys Gln Asp Leu Cys Leu Leu		2480
2485	2490	2495
Thr His Gln Gly His Val Asn Cys Ser Cys Arg Gly Gly Arg Ile Leu		
2500	2505	2510
Gln Glu Asp Phe Thr Cys Arg Ala Val Asn Ser Ser Cys Arg Ala Gln		
2515	2520	2525
Asp Glu Phe Glu Cys Ala Asn Gly Glu Cys Ile Ser Phe Ser Leu Thr		
2530	2535	2540
Cys Asp Gly Val Ser His Cys Lys Asp Lys Ser Asp Glu Lys Pro Ser		
545	2550	2555
Tyr Cys Asn Ser Arg Arg Cys Lys Lys Thr Phe Arg Gln Cys Asn Asn		2560
2565	2570	2575
Gly Arg Cys Val Ser Asn Met Leu Trp Cys Asn Gly Val Asp Tyr Cys		
2580	2585	2590
Gly Asp Gly Ser Asp Glu Ile Pro Cys Asn Lys Thr Ala Cys Gly Val		
2595	2600	2605
Gly Glu Phe Arg Cys Arg Asp Gly Ser Cys Ile Gly Asn Ser Ser Arg		
2610	2615	2620
Cys Asn Gln Phe Val Asp Cys Glu Asp Ala Ser Asp Glu Met Asn Cys		
625	2630	2635
Ser Ala Thr Asp Cys Ser Ser Tyr Phe Arg Leu Gly Val Lys Gly Val		
2645	2650	2655
Leu Phe Gln Pro Cys Glu Arg Thr Ser Leu Cys Tyr Ala Pro Ser Trp		
2660	2665	2670
Val Cys Asp Gly Ala Asn Asp Cys Gly Asp Tyr Ser Asp Glu Arg Asp		
2675	2680	2685
Cys Pro Gly Val Lys Arg Pro Arg Cys Pro Leu Asn Tyr Phe Ala Cys		
2690	2695	2700
Pro Ser Gly Arg Cys Ile Pro Met Ser Trp Thr Cys Asp Lys Glu Asp		
705	2710	2715
Asp Cys Glu Asn Gly Glu Asp Glu Thr His Cys Asn Lys Phe Cys Ser		2720
2725	2730	2735
Glu Ala Gln Phe Glu Cys Gln Asn His Arg Cys Ile Ser Lys Gln Trp		
2740	2745	2750
Leu Cys Asp Gly Ser Asp Asp Cys Gly Asp Gly Ser Asp Glu Ala Ala		
2755	2760	2765
His Cys Glu Gly Lys Thr Cys Gly Pro Ser Ser Phe Ser Cys Pro Gly		
2770	2775	2780
Thr His Val Cys Val Pro Glu Arg Trp Leu Cys Asp Gly Asp Lys Asp		
785	2790	2795
Cys Thr Asp Gly Ala Asp Glu Ser Val Thr Ala Gly Cys Leu Tyr Asn		2800
2805	2810	2815

FIG. 6b

Ser Thr Cys Asp Asp Arg Glu Phe Met Cys Gln Asn Arg Leu Cys Ile  
 2820 2825 2830  
 Pro Lys His Phe Val Cys Asp His Asp Arg Asp Cys Ala Asp Gly Ser  
 2835 2840 2845  
 Asp Glu Ser Pro Glu Cys Glu Tyr Pro Thr Cys Gly Pro Asn Glu Phe  
 2850 2855 2860  
 Arg Cys Ala Asn Gly Arg Cys Leu Ser Ser Arg Gln Trp Glu Cys Asp  
 865 2870 2875 2880  
 Gly Glu Asn Asp Cys His Asp His Ser Asp Glu Ala Pro Lys Asn Pro  
 2885 2890 2895  
 His Cys Thr Ser Pro Glu His Lys Cys Asn Ala Ser Ser Gln Phe Leu  
 2900 2905 2910  
 Cys Ser Ser Gly Arg Cys Val Ala Glu Ala Leu Leu Cys Asn Gly Gln  
 2915 2920 2925  
 Asp Asp Cys Gly Asp Gly Ser Asp Glu Arg Gly Cys His Val Asn Glu  
 2930 2935 2940  
 Cys Leu Ser Arg Lys Leu Ser Gly Cys Ser Gln Asp Cys Glu Asp Leu  
 945 2950 2955 2960  
 Lys Ile Gly Phe Lys Cys Arg Cys Arg Pro Gly Phe Arg Leu Lys Asp  
 2965 2970 2975  
 Asp Gly Arg Thr Cys Ala Asp Leu Asp Glu Cys Ser Thr Thr Phe Pro  
 2980 2985 2990  
 Cys Ser Gln Leu Cys Ile Asn Thr His Gly Ser Tyr Lys Cys Leu Cys  
 2995 3000 3005  
 Val Glu Gly Tyr Ala Pro Arg Gly Gly Asp Pro His Ser Cys Lys Ala  
 3010 3015 3020  
 Val Thr Asp Glu Glu Pro Phe Leu Ile Phe Ala Asn Arg Tyr Tyr Leu  
 025 3030 3035 3040  
 Arg Lys Leu Asn Leu Asp Gly Ser Asn Tyr Thr Leu Leu Lys Gln Gly  
 3045 3050 3055  
 Leu Asn Asn Ala Val Ala Leu Ala Phe Asp Tyr Arg Glu Gln Met Ile  
 3060 3065 3070  
 Tyr Trp Thr Gly Val Thr Thr Gln Gly Ser Met Ile Arg Arg Met His  
 3075 3080 3085  
 Leu Asn Gly Ser Asn Val Gln Val Leu His Arg Thr Gly Leu Ser Asn  
 3090 3095 3100  
 Pro Asp Gly Leu Ala Val Asp Trp Val Gly Gly Asn Leu Tyr Trp Cys  
 105 3110 3115 3120  
 Asp Lys Gly Arg Asp Thr Ile Glu Val Ser Lys Leu Asn Gly Ala Tyr  
 3125 3130 3135  
 Arg Thr Val Leu Val Ser Ser Gly Leu Arg Glu Pro Arg Ala Leu Val  
 3140 3145 3150  
 Val Asp Val Gln Asn Gly Tyr Leu Tyr Trp Thr Asp Trp Gly Asp His  
 3155 3160 3165  
 Ser Leu Ile Gly Arg Ile Gly Met Asp Gly Ser Gly Arg Ser Ile Ile  
 3170 3175 3180  
 Val Asp Thr Lys Ile Thr Trp Pro Asn Gly Leu Thr Val Asp Tyr Val  
 185 3190 3195 3200  
 Thr Glu Arg Ile Tyr Trp Ala Asp Ala Arg Glu Asp Tyr Ile Glu Phe  
 3205 3210 3215  
 Ala Ser Leu Asp Gly Ser Asn Arg His Val Val Leu Ser Gln Asp Ile  
 3220 3225 3230  
 Pro His Ile Phe Ala Leu Thr Leu Phe Glu Asp Tyr Val Tyr Trp Thr  
 3235 3240 3245  
 Asp Trp Glu Thr Lys Ser Ile Asn Arg Ala His Lys Thr Thr Gly Ala  
 3250 3255 3260  
 Asn Lys Thr Leu Leu Ile Ser Thr Leu His Arg Pro Met Asp Leu His  
 265 3270 3275 3280  
 Val Phe His Ala Leu Arg Gln Pro Asp Val Pro Asn His Pro Cys Lys

FIG. 6b

	3285		3290		3295
Val	Asn	Asn	Gly	Gly	Cys
	3300		3305		3310
Gly	His	Lys	Cys	Ala	Cys
	3315		3320		3325
Arg	Thr	Cys	Val	Ser	Asn
	3330		3335		3340
Asp	Lys	Cys	Ile	Pro	Phe
	3345		3350		3355
Gly	Asp	His	Ser	Asp	Glu
	3365		3370		3375
Pro	Gly	Gln	Phe	Gln	Cys
	3380		3385		3390
Ile	Cys	Asp	Gly	Asp	Asn
	3395		3400		3405
Cys	Asp	Ile	His	Val	Cys
	3410		3415		3420
Asn	Arg	Cys	Ile	Pro	Gly
	3425		3430		3435
Gly	Asp	Gly	Glu	Asp	Glu
	3445		3450		3455
Asn	Gln	Phe	Gln	Cys	Ser
	3460		3465		3470
Val	Cys	Asp	Arg	Asp	Asn
	3475		3480		3485
Asn	Cys	Thr	Gln	Met	Thr
	3490		3495		3500
Ser	Gly	Arg	Cys	Ile	Pro
	3505		3510		3515
Cys	Gly	Asp	Gly	Ser	Asp
	3525		3530		3535
Cys	Glu	Pro	Tyr	Gln	Phe
	3540		3545		3550
Arg	Trp	Gln	Cys	Asp	Tyr
	3555		3560		3565
Glu	Ser	Cys	Thr	Pro	Arg
	3570		3575		3580
Asn	Gly	Arg	Cys	Ile	Ala
	3585		3590		3595
Cys	Ala	Asp	Gly	Ser	Asp
	3605		3610		3615
Asp	Gln	Phe	Gln	Cys	Lys
	3620		3625		3630
Cys	Asp	Ala	Asp	Ala	Asp
	3635		3640		3645
Gly	Thr	Gly	Val	Arg	Thr
	3650		3655		3660
Thr	Leu	Cys	Lys	Pro	Leu
	3665		3670		3675
Gly	Asp	Asn	Ser	Asp	Glu
	3685		3690		3695
Pro	Pro	Asn	Arg	Pro	Phe
	3700		3705		3710
Ile	Gly	Arg	Gln	Cys	Asp
	3715		3720		3725
Glu	Glu	Asp	Cys	Glu	Pro
	3730		3735		3740
Lys	Lys	Glu	Phe	Leu	Cys
	3745		3750		3755
					3760

FIG. 6b

Arg Cys Asn Met Phe Asp Asp Cys Gly Asp Gly Ser Asp Glu Glu Asp  
 3765 3770 3775  
 Cys Ser Ile Asp Pro Lys Leu Thr Ser Cys Ala Thr Asn Ala Ser Met  
 3780 3785 3790  
 Cys Gly Asp Glu Ala Arg Cys Val Arg Thr Glu Lys Ala Ala Tyr Cys  
 3795 3800 3805  
 Ala Cys Arg Ser Gly Phe His Thr Val Pro Gly Gln Pro Gly Cys Gln  
 3810 3815 3820  
 Asp Ile Asn Glu Cys Leu Arg Phe Gly Thr Cys Ser Gln Leu Trp Asn  
 825 3830 3835 3840  
 Lys Pro Lys Gly Gly His Leu Cys Ser Cys Ala Arg Asn Phe Met Lys  
 3845 3850 3855  
 Thr His Asn Thr Cys Lys Ala Glu Gly Ser Glu Tyr Gln Val Leu Tyr  
 3860 3865 3870  
 Ile Ala Asp Asp Asn Glu Ile Arg Ser Leu Phe Pro Gly His Pro His  
 3875 3880 3885  
 Ser Ala Tyr Glu Gln Thr Phe Gln Gly Asp Glu Ser Val Arg Ile Asp  
 3890 3895 3900  
 Ala Met Asp Val His Val Lys Ala Gly Arg Val Tyr Trp Thr Asn Trp  
 905 3910 3915 3920  
 His Thr Gly Thr Ile Ser Tyr Arg Ser Leu Pro Pro Ala Ala Pro Pro  
 3925 3930 3935  
 Thr Thr Ser Asn Arg His Arg Arg Gln Ile Asp Arg Gly Val Thr His  
 3940 3945 3950  
 Leu Asn Ile Ser Gly Leu Lys Met Pro Arg Gly Ile Ala Ile Asp Trp  
 3955 3960 3965  
 Val Ala Gly Asn Val Tyr Trp Thr Asp Ser Gly Arg Asp Val Ile Glu  
 3970 3975 3980  
 Val Ala Gln Met Lys Gly Glu Asn Arg Lys Thr Leu Ile Ser Gly Met  
 985 3990 3995 4000  
 Ile Asp Glu Pro His Ala Ile Val Val Asp Pro Leu Arg Gly Thr Met  
 4005 4010 4015  
 Tyr Trp Ser Asp Trp Gly Asn His Pro Lys Ile Glu Thr Ala Ala Met  
 4020 4025 4030  
 Asp Gly Thr Leu Arg Glu Thr Leu Val Gln Asp Asn Ile Gln Trp Pro  
 4035 4040 4045  
 Thr Gly Leu Ala Val Asp Tyr His Asn Glu Arg Leu Tyr Trp Ala Asp  
 4050 4055 4060  
 Ala Lys Leu Ser Val Ile Gly Ser Ile Arg Leu Asn Gly Thr Asp Pro  
 065 4070 4075 4080  
 Ile Val Ala Ala Asp Ser Lys Arg Gly Leu Ser His Pro Phe Ser Ile  
 4085 4090 4095  
 Asp Val Phe Glu Asp Tyr Ile Tyr Gly Val Thr Tyr Ile Asn Asn Arg  
 4100 4105 4110  
 Val Phe Lys Ile His Lys Phe Gly His Ser Pro Leu Tyr Asn Leu Thr  
 4115 4120 4125  
 Gly Gly Leu Ser His Ala Ser Asp Val Val Leu Tyr His Gln His Lys  
 4130 4135 4140  
 Gln Pro Glu Val Thr Asn Pro Cys Asp Arg Lys Lys Cys Glu Trp Leu  
 145 4150 4155 4160  
 Cys Leu Leu Ser Pro Ser Gly Pro Val Cys Thr Cys Pro Asn Gly Lys  
 4165 4170 4175  
 Arg Leu Asp Asn Gly Thr Cys Val Pro Val Pro Ser Pro Thr Pro Pro  
 4180 4185 4190  
 Pro Asp Ala Pro Arg Pro Gly Thr Cys Thr Leu Gln Cys Phe Asn Gly  
 4195 4200 4205  
 Gly Ser Cys Phe Leu Asn Ala Arg Arg Gln Pro Lys Cys Arg Cys Gln  
 4210 4215 4220  
 Pro Arg Tyr Thr Gly Asp Lys Cys Glu Leu Asp Gln Cys Trp Glu Tyr

FIG. 6b

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225                      4230                      4235                      4240  
 Cys His Asn Gly Gly Thr Cys Ala Ala Ser Pro Ser Gly Met Pro Thr  
                                  4245                      4250                      4255  
 Cys Arg Cys Pro Thr Gly Phe Thr Gly Pro Lys Cys Thr Ala Gln Val  
                                  4260                      4265                      4270  
 Cys Ala Gly Tyr Cys Ser Asn Asn Ser Thr Cys Thr Val Asn Gln Gly  
                                  4275                      4280                      4285  
 Asn Gln Pro Gln Cys Arg Cys Leu Pro Gly Phe Leu Gly Asp Arg Cys  
                                  4290                      4295                      4300  
 Gln Tyr Arg Gln Cys Ser Gly Phe Cys Glu Asn Phe Gly Thr Cys Gln  
 305                      4310                      4315                      4320  
 Met Ala Ala Asp Gly Ser Arg Gln Cys Arg Cys Thr Val Tyr Phe Glu  
                                  4325                      4330                      4335  
 Gly Pro Arg Cys Glu Val Asn Lys Cys Ser Arg Cys Leu Gln Gly Ala  
                                  4340                      4345                      4350  
 Cys Val Val Asn Lys Gln Thr Gly Asp Val Thr Cys Asn Cys Thr Asp  
                                  4355                      4360                      4365  
 Gly Arg Val Ala Pro Ser Cys Leu Thr Cys Ile Asp His Cys Ser Asn  
 4370                      4375                      4380  
 Gly Gly Ser Cys Thr Met Asn Ser Lys Met Met Pro Glu Cys Gln Cys  
 385                      4390                      4395                      4400  
 Pro Pro His Met Thr Gly Pro Arg Cys Gln Glu Gln Val Val Ser Gln  
                                  4405                      4410                      4415  
 Gln Gln Pro Gly His Met Ala Ser Ile Leu Ile Pro Leu Leu Leu Leu  
                                  4420                      4425                      4430  
 Leu Leu Leu Leu Leu Val Ala Gly Val Val Phe Trp Tyr Lys Arg Arg  
                                  4435                      4440                      4445  
 Val Arg Gly Ala Lys Gly Phe Gln His Gln Arg Met Thr Asn Gly Ala  
                                  4450                      4455                      4460  
 Met Asn Val Glu Ile Gly Asn Pro Thr Tyr Lys Met Tyr Glu Gly Gly  
 465                      4470                      4475                      4480  
 Glu Pro Asp Asp Val Gly Gly Leu Leu Asp Ala Asp Phe Ala Leu Asp  
                                  4485                      4490                      4495  
 Pro Asp Lys Pro Thr Asn Phe Thr Asn Pro Val Tyr Ala Thr Leu Tyr  
                                  4500                      4505                      4510  
 Met Gly Gly His Gly Ser Arg His Ser Leu Ala Ser Thr Asp Glu Lys  
                                  4515                      4520                      4525  
 Arg Glu Leu Leu Gly Arg Gly Pro Glu Asp Glu Ile Gly Asp Pro Leu  
 4530                      4535                      4540  
 Ala  
 545

FIG. 6b

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GCTACAATCC	ATCTGGTCTC	CTCCAGCTCC	TTCTTTCTGC	AAC	ATG	GGG	AAG	AAC									55
					Met	Gly	Lys	Asn									
					1												
AAA	CTC	CTT	CAT	CCA	AGT	CTG	GTT	CTT	CTC	CTC	TTG	GTC	CTC	CTG	CCC		103
Lys	Leu	Leu	His	Pro	Ser	Leu	Val	Leu	Leu	Leu	Leu	Val	Leu	Leu	Pro		
5					10					15					20		
ACA	GAC	GCC	TCA	GTC	TCT	GGA	AAA	CCG	CAG	TAT	ATG	GTT	CTG	GTC	CCC		151
Thr	Asp	Ala	Ser	Val	Ser	Gly	Lys	Pro	Gln	Tyr	Met	Val	Leu	Val	Pro		
				25					30					35			
TCC	CTG	CTC	CAC	ACT	GAG	ACC	ACT	GAG	AAG	GGC	TGT	GTC	CTT	CTG	AGC		199
Ser	Leu	Leu	His	Thr	Glu	Thr	Thr	Glu	Lys	Gly	Cys	Val	Leu	Leu	Ser		
			40					45					50				
TAC	CTG	AAT	GAG	ACA	GTG	ACT	GTA	AGT	GCT	TCC	TTG	GAG	TCT	GTC	AGG		247
Tyr	Leu	Asn	Glu	Thr	Val	Thr	Val	Ser	Ala	Ser	Leu	Glu	Ser	Val	Arg		
		55					60					65					
GGA	AAC	AGG	AGC	CTC	TTC	ACT	GAC	CTG	GAG	GCG	GAG	AAT	GAC	GTA	CTC		295
Gly	Asn	Arg	Ser	Leu	Phe	Thr	Asp	Leu	Glu	Ala	Glu	Asn	Asp	Val	Leu		
	70					75					80						
CAC	TGT	GTC	GCC	TTC	GCT	GTC	CCA	AAG	TCT	TCA	TCC	AAT	GAG	GAG	GTA		343
His	Cys	Val	Ala	Phe	Ala	Val	Pro	Lys	Ser	Ser	Ser	Asn	Glu	Glu	Val		
85					90					95					100		
ATG	TTC	CTC	ACT	GTC	CAA	GTG	AAA	GGA	CCA	ACC	CAA	GAA	TTT	AAG	AAG		391
Met	Phe	Leu	Thr	Val	Gln	Val	Lys	Gly	Pro	Thr	Gln	Glu	Phe	Lys	Lys		
				105					110					115			
CGG	ACC	ACA	GTG	ATG	GTT	AAG	AAC	GAG	GAC	AGT	CTG	GTC	TTT	GTC	CAG		439
Arg	Thr	Thr	Val	Met	Val	Lys	Asn	Glu	Asp	Ser	Leu	Val	Phe	Val	Gln		
			120					125					130				
ACA	GAC	AAA	TCA	ATC	TAC	AAA	CCA	GGG	CAG	ACA	GTG	AAA	TTT	CGT	GTT		487
Thr	Asp	Lys	Ser	Ile	Tyr	Lys	Pro	Gly	Gln	Thr	Val	Lys	Phe	Arg	Val		
		135					140					145					
GTC	TCC	ATG	GAT	GAA	AAC	TTT	CAC	CCC	CTG	AAT	GAG	TTG	ATT	CCA	CTA		535
Val	Ser	Met	Asp	Glu	Asn	Phe	His	Pro	Leu	Asn	Glu	Leu	Ile	Pro	Leu		
	150					155					160						
GTA	TAC	ATT	CAG	GAT	CCC	AAA	GGA	AAT	CGC	ATC	GCA	CAA	TGG	CAG	AGT		583
Val	Tyr	Ile	Gln	Asp	Pro	Lys	Gly	Asn	Arg	Ile	Ala	Gln	Trp	Gln	Ser		
165					170				175						180		
TTC	CAG	TTA	GAG	GGT	GGC	CTC	AAG	CAA	TTT	TCT	TTT	CCC	CTC	TCA	TCA		631
Phe	Gln	Leu	Glu	Gly	Gly	Leu	Lys	Gln	Phe	Ser	Phe	Pro	Leu	Ser	Ser		
				185					190				195				
GAG	CCC	TTC	CAG	GGC	TCC	TAC	AAG	GTG	GTG	GTA	CAG	AAG	AAA	TCA	GGT		679
Glu	Pro	Phe	Gln	Gly	Ser	Tyr	Lys	Val	Val	Val	Gln	Lys	Lys	Ser	Gly		
			200					205				210					
GGA	AGG	ACA	GAG	CAC	CCT	TTC	ACC	GTG	GAG	GAA	TTT	GTT	CTT	CCC	AAG		727

FIG. 7a

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Gly	Arg	Thr	Glu	His	Pro	Phe	Thr	Val	Glu	Glu	Phe	Val	Leu	Pro	Lys	
		215					220					225				
TTT	GAA	GTA	CAA	GTA	ACA	GTG	CCA	AAG	ATA	ATC	ACC	ATC	TTG	GAA	GAA	775
Phe	Glu	Val	Gln	Val	Thr	Val	Pro	Lys	Ile	Ile	Thr	Ile	Leu	Glu	Glu	
	230					235					240					
GAG	ATG	AAT	GTA	TCA	GTG	TGT	GGC	CTA	TAC	ACA	TAT	GGG	AAG	CCT	GTC	823
Glu	Met	Asn	Val	Ser	Val	Cys	Gly	Leu	Tyr	Thr	Tyr	Gly	Lys	Pro	Val	
	245				250					255					260	
CCT	GGA	CAT	GTG	ACT	GTG	AGC	ATT	TGC	AGA	AAG	TAT	AGT	GAC	GCT	TCC	871
Pro	Gly	His	Val	Thr	Val	Ser	Ile	Cys	Arg	Lys	Tyr	Ser	Asp	Ala	Ser	
				265					270					275		
GAC	TGC	CAC	GGT	GAA	GAT	TCA	CAG	GCT	TTC	TGT	GAG	AAA	TTC	AGT	GGA	919
Asp	Cys	His	Gly	Glu	Asp	Ser	Gln	Ala	Phe	Cys	Glu	Lys	Phe	Ser	Gly	
			280					285					290			
CAG	CTA	AAC	AGC	CAT	GGC	TGC	TTC	TAT	CAG	CAA	GTA	AAA	ACC	AAG	GTC	967
Gln	Leu	Asn	Ser	His	Gly	Cys	Phe	Tyr	Gln	Gln	Val	Lys	Thr	Lys	Val	
		295					300					305				
TTC	CAG	CTG	AAG	AGG	AAG	GAG	TAT	GAA	ATG	AAA	CTT	CAC	ACT	GAG	GCC	1015
Phe	Gln	Leu	Lys	Arg	Lys	Glu	Tyr	Glu	Met	Lys	Leu	His	Thr	Glu	Ala	
	310					315					320					
CAG	ATC	CAA	GAA	GAA	GGA	ACA	GTG	GTG	GAA	TTG	ACT	GGA	AGG	CAG	TCC	1063
Gln	Ile	Gln	Glu	Glu	Gly	Thr	Val	Val	Glu	Leu	Thr	Gly	Arg	Gln	Ser	
	325				330					335					340	
AGT	GAA	ATC	ACA	AGA	ACC	ATA	ACC	AAA	CTC	TCA	TTT	GTG	AAA	GTG	GAC	1111
Ser	Glu	Ile	Thr	Arg	Thr	Ile	Thr	Lys	Leu	Ser	Phe	Val	Lys	Val	Asp	
				345					350					355		
TCA	CAC	TTT	CGA	CAG	GGA	ATT	CCC	TTC	TTT	GGG	CAG	GTG	CGC	CTA	GTA	1159
Ser	His	Phe	Arg	Gln	Gly	Ile	Pro	Phe	Phe	Gly	Gln	Val	Arg	Leu	Val	
			360					365					370			
GAT	GGG	AAA	GGC	GTC	CCT	ATA	CCA	AAT	AAA	GTC	ATA	TTC	ATC	AGA	GGA	1207
Asp	Gly	Lys	Gly	Val	Pro	Ile	Pro	Asn	Lys	Val	Ile	Phe	Ile	Arg	Gly	
		375					380					385				
AAT	GAA	GCA	AAC	TAT	TAC	TCC	AAT	GCT	ACC	ACG	GAT	GAG	CAT	GGC	CTT	1255
Asn	Glu	Ala	Asn	Tyr	Tyr	Ser	Asn	Ala	Thr	Thr	Asp	Glu	His	Gly	Leu	
	390					395					400					
GTA	CAG	TTC	TCT	ATC	AAC	ACC	ACC	AAC	GTT	ATG	GGT	ACC	TCT	CTT	ACT	1303
Val	Gln	Phe	Ser	Ile	Asn	Thr	Thr	Asn	Val	Met	Gly	Thr	Ser	Leu	Thr	
	405				410					415					420	
GTT	AGG	GTC	AAT	TAC	AAG	GAT	CGT	AGT	CCC	TGT	TAC	GGC	TAC	CAG	TGG	1351
Val	Arg	Val	Asn	Tyr	Lys	Asp	Arg	Ser	Pro	Cys	Tyr	Gly	Tyr	Gln	Trp	
				425					430					435		
GTG	TCA	GAA	GAA	CAC	GAA	GAG	GCA	CAT	CAC	ACT	GCT	TAT	CTT	GTG	TTC	1399
Val	Ser	Glu	Glu	His	Glu	Glu	Ala	His	His	Thr	Ala	Tyr	Leu	Val	Phe	
			440				445						450			

FIG. 7a

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TCC	CCA	AGC	AAG	AGC	TTT	GTC	CAC	CTT	GAG	CCC	ATG	TCT	CAT	GAA	CTA	1447
Ser	Pro	Ser	Lys	Ser	Phe	Val	His	Leu	Glu	Pro	Met	Ser	His	Glu	Leu	
		455					460					465				
CCC	TGT	GGC	CAT	ACT	CAG	ACA	GTC	CAG	GCA	CAT	TAT	ATT	CTG	AAT	GGA	1495
Pro	Cys	Gly	His	Thr	Gln	Thr	Val	Gln	Ala	His	Tyr	Ile	Leu	Asn	Gly	
	470					475					480					
GGC	ACC	CTG	CTG	GGG	CTG	AAG	AAG	CTC	TCC	TTT	TAT	TAT	CTG	ATA	ATG	1543
Gly	Thr	Leu	Leu	Gly	Leu	Lys	Lys	Leu	Ser	Phe	Tyr	Tyr	Leu	Ile	Met	
485					490					495					500	
GCA	AAG	GGA	GGC	ATT	GTC	CGA	ACT	GGG	ACT	CAT	GGA	CTG	CTT	GTG	AAG	1591
Ala	Lys	Gly	Gly	Ile	Val	Arg	Thr	Gly	Thr	His	Gly	Leu	Leu	Val	Lys	
				505					510					515		
CAG	GAA	GAC	ATG	AAG	GGC	CAT	TTT	TCC	ATC	TCA	ATC	CCT	GTG	AAG	TCA	1639
Gln	Glu	Asp	Met	Lys	Gly	His	Phe	Ser	Ile	Ser	Ile	Pro	Val	Lys	Ser	
			520					525					530			
GAC	ATT	GCT	CCT	GTC	GCT	CGG	TTG	CTC	ATC	TAT	GCT	GTT	TTA	CCT	ACC	1687
Asp	Ile	Ala	Pro	Val	Ala	Arg	Leu	Leu	Ile	Tyr	Ala	Val	Leu	Pro	Thr	
		535					540					545				
GGG	GAC	GTG	ATT	GGG	GAT	TCT	GCA	AAA	TAT	GAT	GTT	GAA	AAT	TGT	CTG	1735
Gly	Asp	Val	Ile	Gly	Asp	Ser	Ala	Lys	Tyr	Asp	Val	Glu	Asn	Cys	Leu	
	550					555					560					
GCC	AAC	AAG	GTG	GAT	TTG	AGC	TTC	AGC	CCA	TCA	CAA	AGT	CTC	CCA	GCC	1783
Ala	Asn	Lys	Val	Asp	Leu	Ser	Phe	Ser	Pro	Ser	Gln	Ser	Leu	Pro	Ala	
565					570					575					580	
TCA	CAC	GCC	CAC	CTG	CGA	GTC	ACA	GCG	GCT	CCT	CAG	TCC	GTC	TGC	GCC	1831
Ser	His	Ala	His	Leu	Arg	Val	Thr	Ala	Ala	Pro	Gln	Ser	Val	Cys	Ala	
				585					590					595		
CTC	CGT	GCT	GTG	GAC	CAA	AGC	GTG	CTG	CTC	ATG	AAG	CCT	GAT	GCT	GAG	1879
Leu	Arg	Ala	Val	Asp	Gln	Ser	Val	Leu	Leu	Met	Lys	Pro	Asp	Ala	Glu	
			600					605					610			
CTC	TCG	GCG	TCC	TCG	GTT	TAC	AAC	CTG	CTA	CCA	GAA	AAG	GAC	CTC	ACT	1927
Leu	Ser	Ala	Ser	Ser	Val	Tyr	Asn	Leu	Leu	Pro	Glu	Lys	Asp	Leu	Thr	
		615					620					625				
GGC	TTC	CCT	GGG	CCT	TTG	AAT	GAC	CAG	GAC	GAT	GAA	GAC	TGC	ATC	AAT	1975
Gly	Phe	Pro	Gly	Pro	Leu	Asn	Asp	Gln	Asp	Asp	Glu	Asp	Cys	Ile	Asn	
	630					635					640					
CGT	CAT	AAT	GTC	TAT	ATT	AAT	GGA	ATC	ACA	TAT	ACT	CCA	GTA	TCA	AGT	2023
Arg	His	Asn	Val	Tyr	Ile	Asn	Gly	Ile	Thr	Tyr	Thr	Pro	Val	Ser	Ser	
645					650					655					660	
ACA	AAT	GAA	AAG	GAT	ATG	TAC	AGC	TTC	CTA	GAG	GAC	ATG	GGC	TTA	AAG	2071
Thr	Asn	Glu	Lys	Asp	Met	Tyr	Ser	Phe	Leu	Glu	Asp	Met	Gly	Leu	Lys	
				665					670					675		
GCA	TTC	ACC	AAC	TCA	AAG	ATT	CGT	AAA	CCC	AAA	ATG	TGT	CCA	CAG	CTT	2119
Ala	Phe	Thr	Asn	Ser	Lys	Ile	Arg	Lys	Pro	Lys	Met	Cys	Pro	Gln	Leu	
			680					685					690			

FIG. 7a

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CAA Gln	CAG Gln	TAT Tyr 695	GAA Glu	ATG Met	CAT His	GGA Gly	CCT Pro 700	GAA Glu	GGT Gly	CTA Leu	CGT Arg	GTA Val 705	GGT Gly	TTT Phe	TAT Tyr	2167
GAG Glu	TCA Ser 710	GAT Asp	GTA Val	ATG Met	GGA Gly	AGA Arg 715	GGC Gly	CAT His	GCA Ala	CGC Arg	CTG Leu 720	GTG Val	CAT His	GTT Val	GAA Glu	2215
GAG Glu 725	CCT Pro	CAC His	ACG Thr	GAG Glu	ACC Thr 730	GTA Val	CGA Arg	AAG Lys	TAC Tyr	TTC Phe 735	CCT Pro	GAG Glu	ACA Thr	TGG Trp	ATC Ile 740	2263
TGG Trp	GAT Asp	TTG Leu	GTG Val	GTG Val 745	GTA Val	AAC Asn	TCA Ser	GCA Ala	GGG Gly 750	GTG Val	GCT Ala	GAG Glu	GTA Val	GGA Gly 755	GTA Val	2311
ACA Thr	GTC Val	CCT Pro	GAC Asp 760	ACC Thr	ATC Ile	ACC Thr	GAG Glu	TGG Trp 765	AAG Lys	GCA Ala	GGG Gly	GCC Ala	TTC Phe 770	TGC Cys	CTG Leu	2359
TCT Ser	GAA Glu	GAT Asp 775	GCT Ala	GGA Gly	CTT Leu	GGT Gly	ATC Ile 780	TCT Ser	TCC Ser	ACT Thr	GCC Ala	TCT Ser 785	CTC Leu	CGA Arg	GCC Ala	2407
TTC Phe	CAG Gln 790	CCC Pro	TTC Phe	TTT Phe	GTG Val	GAG Glu 795	CTT Leu	ACA Thr	ATG Met	CCT Pro	TAC Tyr 800	TCT Ser	GTG Val	ATT Ile	CGT Arg	2455
GGA Gly 805	GAG Glu	GCC Ala	TTC Phe	ACA Thr	CTC Leu 810	AAG Lys	GCC Ala	ACG Thr	GTC Val	CTA Leu 815	AAC Asn	TAC Tyr	CTT Leu	CCC Pro	AAA Lys 820	2503
TGC Cys	ATC Ile	CGG Arg	GTC Val	AGT Ser 825	GTG Val	CAG Gln	CTG Leu	GAA Glu	GCC Ala 830	TCT Ser	CCC Pro	GCC Ala	TTC Phe	CTT Leu 835	GCT Ala	2551
GTC Val	CCA Pro	GTG Val	GAG Glu 840	AAG Lys	GAA Glu	CAA Gln	GCG Ala	CCT Pro 845	CAC His	TGC Cys	ATC Ile	TGT Cys	GCA Ala 850	AAC Asn	GGG Gly	2599
CGG Arg	CAA Gln	ACT Thr 855	GTG Val	TCC Ser	TGG Trp	GCA Ala	GTA Val 860	ACC Thr	CCA Pro	AAG Lys	TCA Ser	TTA Leu 865	GGA Gly	AAT Asn	GTG Val	2647
AAT Asn 870	TTC Phe	ACT Thr	GTG Val	AGC Ser	GCA Ala	GAG Glu 875	GCA Ala	CTA Leu	GAG Glu	TCT Ser	CAA Gln 880	GAG Glu	CTG Leu	TGT Cys	GGG Gly	2695
ACT Thr 885	GAG Glu	GTG Val	CCT Pro	TCA Ser	GTT Val 890	CCT Pro	GAA Glu	CAC His	GGA Gly	AGG Arg 895	AAA Lys	GAC Asp	ACA Thr	GTC Val	ATC Ile 900	2743
AAG Lys	CCT Pro	CTG Leu	TTG Leu	GTT Val 905	GAA Glu	CCT Pro	GAA Glu	GGA Gly	CTA Leu 910	GAG Glu	AAG Lys	GAA Glu	ACA Thr 915	ACA Thr	TTC Phe	2791
AAC Asn	TCC Ser	CTA Leu	CTT Leu	TGT Cys	CCA Pro	TCA Ser	GGT Gly	GGT Gly 925	GAG Glu	GTT Val	TCT Ser	GAA Glu	GAA Glu	TTA Leu	TCC Ser	2839

FIG. 7a

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CTG	AAA	CTG	CCA	CCA	AAT	GTG	GTA	GAA	GAA	TCT	GCC	CGA	GCT	TCT	GTC	2887
Leu	Lys	Leu	Pro	Pro	Asn	Val	Val	Glu	Glu	Ser	Ala	Arg	Ala	Ser	Val	
		935					940					945				
TCA	GTT	TTG	GGA	GAC	ATA	TTA	GGC	TCT	GCC	ATG	CAA	AAC	ACA	CAA	AAT	2935
Ser	Val	Leu	Gly	Asp	Ile	Leu	Gly	Ser	Ala	Met	Gln	Asn	Thr	Gln	Asn	
	950					955				960						
CTT	CTC	CAG	ATG	CCC	TAT	GGC	TGT	GGA	GAG	CAG	AAT	ATG	GTC	CTC	TTT	2983
Leu	Leu	Gln	Met	Pro	Tyr	Gly	Cys	Gly	Glu	Gln	Asn	Met	Val	Leu	Phe	
	965				970					975					980	
GCT	CCT	AAC	ATC	TAT	GTA	CTG	GAT	TAT	CTA	AAT	GAA	ACA	CAG	CAG	CTT	3031
Ala	Pro	Asn	Ile	Tyr	Val	Leu	Asp	Tyr	Leu	Asn	Glu	Thr	Gln	Gln	Leu	
				985					990					995		
ACT	CCA	GAG	GTC	AAG	TCC	AAG	GCC	ATT	GGC	TAT	CTC	AAC	ACT	GGT	TAC	3079
Thr	Pro	Glu	Val	Lys	Ser	Lys	Ala	Ile	Gly	Tyr	Leu	Asn	Thr	Gly	Tyr	
		1000					1005					1010				
CAG	AGA	CAG	TTG	AAC	TAC	AAA	CAC	TAT	GAT	GGC	TCC	TAC	AGC	ACC	TTT	3127
Gln	Arg	Gln	Leu	Asn	Tyr	Lys	His	Tyr	Asp	Gly	Ser	Tyr	Ser	Thr	Phe	
	1015					1020					1025					
GGG	GAG	CGA	TAT	GGC	AGG	AAC	CAG	GGC	AAC	ACC	TGG	CTC	ACA	GCC	TTT	3175
Gly	Glu	Arg	Tyr	Gly	Arg	Asn	Gln	Gly	Asn	Thr	Trp	Leu	Thr	Ala	Phe	
	1030					1035				1040						
GTT	CTG	AAG	ACT	TTT	GCC	CAA	GCT	CGA	GCC	TAC	ATC	TTC	ATC	GAT	GAA	3223
Val	Leu	Lys	Thr	Phe	Ala	Gln	Ala	Arg	Ala	Tyr	Ile	Phe	Ile	Asp	Glu	
	1045				1050				1055					1060		
GCA	CAC	ATT	ACC	CAA	GCC	CTC	ATA	TGG	CTC	TCC	CAG	AGG	CAG	AAG	GAC	3271
Ala	His	Ile	Thr	Gln	Ala	Leu	Ile	Trp	Leu	Ser	Gln	Arg	Gln	Lys	Asp	
				1065				1070					1075			
AAT	GGC	TGT	TTC	AGG	AGC	TCT	GGG	TCA	CTG	CTC	AAC	AAT	GCC	ATA	AAG	3319
Asn	Gly	Cys	Phe	Arg	Ser	Ser	Gly	Ser	Leu	Leu	Asn	Asn	Ala	Ile	Lys	
		1080					1085					1090				
GGA	GGA	GTA	GAA	GAT	GAA	GTG	ACC	CTC	TCC	GCC	TAT	ATC	ACC	ATC	GCC	3367
Gly	Gly	Val	Glu	Asp	Glu	Val	Thr	Leu	Ser	Ala	Tyr	Ile	Thr	Ile	Ala	
	1095					1100					1105					
CTT	CTG	GAG	ATT	CCT	CTC	ACA	GTC	ACT	CAC	CCT	GTT	GTC	CGC	AAT	GCC	3415
Leu	Leu	Glu	Ile	Pro	Leu	Thr	Val	Thr	His	Pro	Val	Val	Arg	Asn	Ala	
	1110					1115				1120						
CTG	TTT	TGC	CTG	GAG	TCA	GCC	TGG	AAG	ACA	GCA	CAA	GAA	GGG	GAC	CAT	3463
Leu	Phe	Cys	Leu	Glu	Ser	Ala	Trp	Lys	Thr	Ala	Gln	Glu	Gly	Asp	His	
	1125				1130				1135					1140		
GGC	AGC	CAT	GTA	TAT	ACC	AAA	GCA	CTG	CTG	GCC	TAT	GCT	TTT	GCC	CTG	3511
Gly	Ser	His	Val	Tyr	Thr	Lys	Ala	Leu	Leu	Ala	Tyr	Ala	Phe	Ala	Leu	
				1145				1150					1155			
GCA	GGT	AAC	CAG	GAC	AAG	AGG	AAG	GAA	GTA	CTC	AAG	TCA	CTT	AAT	GAG	3559
Ala	Gly	Asn	Gln	Asp	Lys	Arg	Lys	Glu	Val	Leu	Lys	Ser	Leu	Asn	Glu	
		1160					1165					1170				

FIG. 7a

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GAA	GCT	GTG	AAG	AAA	GAC	AAC	TCT	GTC	CAT	TGG	GAG	CGC	CCT	CAG	AAA	3607
Glu	Ala	Val	Lys	Lys	Asp	Asn	Ser	Val	His	Trp	Glu	Arg	Pro	Gln	Lys	
	1175						1180					1185				
CCC	AAG	GCA	CCA	GTG	GGG	CAT	TTT	TAC	GAA	CCC	CAG	GCT	CCC	TCT	GCT	3655
Pro	Lys	Ala	Pro	Val	Gly	His	Phe	Tyr	Glu	Pro	Gln	Ala	Pro	Ser	Ala	
	1190					1195					1200					
GAG	GTG	GAG	ATG	ACA	TCC	TAT	GTG	CTC	CTC	GCT	TAT	CTC	ACG	GCC	CAG	3703
Glu	Val	Glu	Met	Thr	Ser	Tyr	Val	Leu	Leu	Ala	Tyr	Leu	Thr	Ala	Gln	
1205					1210					1215					1220	
CCA	GCC	CCA	ACC	TCG	GAG	GAC	CTG	ACC	TCT	GCA	ACC	AAC	ATC	GTG	AAG	3751
Pro	Ala	Pro	Thr	Ser	Glu	Asp	Leu	Thr	Ser	Ala	Thr	Asn	Ile	Val	Lys	
				1225					1230					1235		
TGG	ATC	ACG	AAG	CAG	CAG	AAT	GCC	CAG	GGC	GGT	TTC	TCC	TCC	ACC	CAG	3799
Trp	Ile	Thr	Lys	Gln	Gln	Asn	Ala	Gln	Gly	Gly	Phe	Ser	Ser	Thr	Gln	
			1240					1245						1250		
GAC	ACA	GTG	GTG	GCT	CTC	CAT	GCT	CTG	TCC	AAA	TAT	GGA	GCC	GCC	ACA	3847
Asp	Thr	Val	Val	Ala	Leu	His	Ala	Leu	Ser	Lys	Tyr	Gly	Ala	Ala	Thr	
	1255						1260					1265				
TTT	ACC	AGG	ACT	GGG	AAG	GCT	GCA	CAG	GTG	ACT	ATC	CAG	TCT	TCA	GGG	3895
Phe	Thr	Arg	Thr	Gly	Lys	Ala	Ala	Gln	Val	Thr	Ile	Gln	Ser	Ser	Gly	
	1270					1275					1280					
ACA	TTT	TCC	AGC	AAA	TTC	CAA	GTG	GAC	AAC	AAC	AAT	CGC	CTG	TTA	CTG	3943
Thr	Phe	Ser	Ser	Lys	Phe	Gln	Val	Asp	Asn	Asn	Asn	Arg	Leu	Leu	Leu	
1285					1290					1295					1300	
CAG	CAG	GTC	TCA	TTG	CCA	GAG	CTG	CCT	GGG	GAA	TAC	AGC	ATG	AAA	GTG	3991
Gln	Gln	Val	Ser	Leu	Pro	Glu	Leu	Pro	Gly	Glu	Tyr	Ser	Met	Lys	Val	
				1305					1310					1315		
ACA	GGA	GAA	GGA	TGT	GTC	TAC	CTC	CAG	ACC	TCC	TTG	AAA	TAC	AAT	ATT	4039
Thr	Gly	Glu	Gly	Cys	Val	Tyr	Leu	Gln	Thr	Ser	Leu	Lys	Tyr	Asn	Ile	
			1320					1325					1330			
CTC	CCA	GAA	AAG	GAA	GAG	TTC	CCC	TTT	GCT	TTA	GGA	GTG	CAG	ACT	CTG	4087
Leu	Pro	Glu	Lys	Glu	Glu	Phe	Pro	Phe	Ala	Leu	Gly	Val	Gln	Thr	Leu	
	1335						1340					1345				
CCT	CAA	ACT	TGT	GAT	GAA	CCC	AAA	GCC	CAC	ACC	AGC	TTC	CAA	ATC	TCC	4135
Pro	Gln	Thr	Cys	Asp	Glu	Pro	Lys	Ala	His	Thr	Ser	Phe	Gln	Ile	Ser	
	1350					1355					1360					
CTA	AGT	GTC	AGT	TAC	ACA	GGG	AGC	CGC	TCT	GCC	TCC	AAC	ATG	GCG	ATC	4183
Leu	Ser	Val	Ser	Tyr	Thr	Gly	Ser	Arg	Ser	Ala	Ser	Asn	Met	Ala	Ile	
1365					1370				1375						1380	
GTT	GAT	GTG	AAG	ATG	GTC	TCT	GGC	TTC	ATT	CCC	CTG	AAG	CCA	ACA	GTG	4231
Val	Asp	Val	Lys	Met	Val	Ser	Gly	Phe	Ile	Pro	Leu	Lys	Pro	Thr	Val	
				1385					1390					1395		
AAA	ATG	CTT	GAA	AGA	TCT	AAC	CAT	GTG	AGC	CGG	ACA	GAA	GTC	AGC	AGC	4279
Lys	Met	Leu	Glu	Arg	Ser	Asn	His	Val	Ser	Arg	Thr	Glu	Val	Ser	Ser	
			1400					1405					1410			

FIG. 7a

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AAC CAT GTC TTG ATT TAC CTT GAT AAG GTG TCA AAT CAG ACA CTG AGC	4327
Asn His Val Leu Ile Tyr Leu Asp Lys Val Ser Asn Gln Thr Leu Ser	
1415 1420 1425	
TTG TTC TTC ACG GTT CTG CAA GAT GTC CCA GTA AGA GAT CTC AAA CCA	4375
Leu Phe Phe Thr Val Leu Gln Asp Val Pro Val Arg Asp Leu Lys Pro	
1430 1435 1440	
GCC ATA GTG AAA GTC TAT GAT TAC TAC GAG ACG GAT GAG TTT GCA ATC	4423
Ala Ile Val Lys Val Tyr Asp Tyr Tyr Glu Thr Asp Glu Phe Ala Ile	
1445 1450 1455 1460	
GCT GAG TAC AAT GCT CCT TGC AGC AAA GAT CTT GGA AAT GCT TGAAGACCA	4474
Ala Glu Tyr Asn Ala Pro Cys Ser Lys Asp Leu Gly Asn Ala	
1465 1470 1	
CAAGGCTGAA AAGTGCTTTG CTGGAGTCCT GTTCTCTGAG CTCCACAGAA GACACGTGTT	4534
TTTGTATCTT TAAAGACTTG ATGAATAAAC ACTTTTCTG GTC	4577

FIG. 7a

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Ser	Val	Ser	Gly	Lys	Pro	Gln	Tyr	Met	Val	Leu	Val	Pro	Ser	Leu	Leu
1				5					10					15	
His	Thr	Glu	Thr	Thr	Glu	Lys	Gly	Cys	Val	Leu	Leu	Ser	Tyr	Leu	Asn
			20					25					30		
Glu	Thr	Val	Thr	Val	Ser	Ala	Ser	Leu	Glu	Ser	Val	Arg	Gly	Asn	Arg
		35				40						45			
Ser	Leu	Phe	Thr	Asp	Leu	Glu	Ala	Glu	Asn	Asp	Val	Leu	His	Cys	Val
	50				55						60				
Ala	Phe	Ala	Val	Pro	Lys	Ser	Ser	Ser	Asn	Glu	Glu	Val	Met	Phe	Leu
65					70					75					80
Thr	Val	Gln	Val	Lys	Gly	Pro	Thr	Gln	Glu	Phe	Lys	Lys	Arg	Thr	Thr
			85					90						95	
Val	Met	Val	Lys	Asn	Glu	Asp	Ser	Leu	Val	Phe	Val	Gln	Thr	Asp	Lys
			100					105					110		
Ser	Ile	Tyr	Lys	Pro	Gly	Gln	Thr	Val	Lys	Phe	Arg	Val	Val	Ser	Met
	115					120						125			
Asp	Glu	Asn	Phe	His	Pro	Leu	Asn	Glu	Leu	Ile	Pro	Leu	Val	Tyr	Ile
	130					135					140				
Gln	Asp	Pro	Lys	Gly	Asn	Arg	Ile	Ala	Gln	Trp	Gln	Ser	Phe	Gln	Leu
145					150					155					160
Glu	Gly	Gly	Leu	Lys	Gln	Phe	Ser	Phe	Pro	Leu	Ser	Ser	Glu	Pro	Phe
			165						170					175	
Gln	Gly	Ser	Tyr	Lys	Val	Val	Val	Gln	Lys	Lys	Ser	Gly	Gly	Arg	Thr
			180					185					190		
Glu	His	Pro	Phe	Thr	Val	Glu	Glu	Phe	Val	Leu	Pro	Lys	Phe	Glu	Val
		195				200						205			
Gln	Val	Thr	Val	Pro	Lys	Ile	Ile	Thr	Ile	Leu	Glu	Glu	Glu	Met	Asn
	210					215					220				
Val	Ser	Val	Cys	Gly	Leu	Tyr	Thr	Tyr	Gly	Lys	Pro	Val	Pro	Gly	His
225					230					235					240
Val	Thr	Val	Ser	Ile	Cys	Arg	Lys	Tyr	Ser	Asp	Ala	Ser	Asp	Cys	His
			245					250						255	
Gly	Glu	Asp	Ser	Gln	Ala	Phe	Cys	Glu	Lys	Phe	Ser	Gly	Gln	Leu	Asn
		260						265					270		
Ser	His	Gly	Cys	Phe	Tyr	Gln	Gln	Val	Lys	Thr	Lys	Val	Phe	Gln	Leu
		275				280						285			
Lys	Arg	Lys	Glu	Tyr	Glu	Met	Lys	Leu	His	Thr	Glu	Ala	Gln	Ile	Gln
	290					295					300				
Glu	Glu	Gly	Thr	Val	Val	Glu	Leu	Thr	Gly	Arg	Gln	Ser	Ser	Glu	Ile
305					310					315					320
Thr	Arg	Thr	Ile	Thr	Lys	Leu	Ser	Phe	Val	Lys	Val	Asp	Ser	His	Phe
			325						330					335	
Arg	Gln	Gly	Ile	Pro	Phe	Phe	Gly	Gln	Val	Arg	Leu	Val	Asp	Gly	Lys
			340					345					350		
Gly	Val	Pro	Ile	Pro	Asn	Lys	Val	Ile	Phe	Ile	Arg	Gly	Asn	Glu	Ala
		355					360					365			
Asn	Tyr	Tyr	Ser	Asn	Ala	Thr	Thr	Asp	Glu	His	Gly	Leu	Val	Gln	Phe
	370					375					380				
Ser	Ile	Asn	Thr	Thr	Asn	Val	Met	Gly	Thr	Ser	Leu	Thr	Val	Arg	Val
385					390					395					400
Asn	Tyr	Lys	Asp	Arg	Ser	Pro	Cys	Tyr	Gly	Tyr	Gln	Trp	Val	Ser	Glu
			405					410						415	
Glu	His	Glu	Glu	Ala	His	His	Thr	Ala	Tyr	Leu	Val	Phe	Ser	Pro	Ser
			420					425					430		
Lys	Ser	Phe	Val	His	Leu	Glu	Pro	Met	Ser	His	Glu	Leu	Pro	Cys	Gly
		435					440					445			
His	Thr	Gln	Thr	Val	Gln	Ala	His	Tyr	Ile	Leu	Asn	Gly	Gly	Thr	Leu
	450					455					460				
Leu	Gly	Leu	Lys	Lys	Leu	Ser	Phe	Tyr	Tyr	Leu	Ile	Met	Ala	Lys	Gly

FIG. 7b

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465	Gly	Ile	Val	Arg	Thr	470	Gly	Thr	His	Gly	Leu	475	Leu	Val	Lys	Gln	Glu	480	Asp
					485							490						495	
Met	Lys	Gly	His	Phe	Ser	Ile	Ser	Ile	Pro	Val	Lys	Ser	Asp	Ile	Ala				
			500						505										
Pro	Val	Ala	Arg	Leu	Leu	Ile	Tyr	Ala	Val	Leu	Pro	Thr	Gly	Asp	Val				
		515					520												
Ile	Gly	Asp	Ser	Ala	Lys	Tyr	Asp	Val	Glu	Asn	Cys	Leu	Ala	Asn	Lys				
	530					535					540								
Val	Asp	Leu	Ser	Phe	Ser	Pro	Ser	Gln	Ser	Leu	Pro	Ala	Ser	His	Ala				
545					550					555									
His	Leu	Arg	Val	Thr	Ala	Ala	Pro	Gln	Ser	Val	Cys	Ala	Leu	Arg	Ala				
				565						570									
Val	Asp	Gln	Ser	Val	Leu	Leu	Met	Lys	Pro	Asp	Ala	Glu	Leu	Ser	Ala				
			580					585											
Ser	Ser	Val	Tyr	Asn	Leu	Leu	Pro	Glu	Lys	Asp	Leu	Thr	Gly	Phe	Pro				
		595					600					605							
Gly	Pro	Leu	Asn	Asp	Gln	Asp	Asp	Glu	Asp	Cys	Ile	Asn	Arg	His	Asn				
	610					615					620								
Val	Tyr	Ile	Asn	Gly	Ile	Thr	Tyr	Thr	Pro	Val	Ser	Ser	Thr	Asn	Glu				
625					630														
Lys	Asp	Met	Tyr	Ser	Phe	Leu	Glu	Asp	Met	Gly	Leu	Lys	Ala	Phe	Thr				
				645					650										
Asn	Ser	Lys	Ile	Arg	Lys	Pro	Lys	Met	Cys	Pro	Gln	Leu	Gln	Gln	Tyr				
			660					665											
Glu	Met	His	Gly	Pro	Glu	Gly	Leu	Arg	Val	Gly	Phe	Tyr	Glu	Ser	Asp				
		675					680					685							
Val	Met	Gly	Arg	Gly	His	Ala	Arg	Leu	Val	His	Val	Glu	Glu	Pro	His				
	690					695					700								
Thr	Glu	Thr	Val	Arg	Lys	Tyr	Phe	Pro	Glu	Thr	Trp	Ile	Trp	Asp	Leu				
705					710						715								
Val	Val	Val	Asn	Ser	Ala	Gly	Val	Ala	Glu	Val	Gly	Val	Thr	Val	Pro				
			725						730										
Asp	Thr	Ile	Thr	Glu	Trp	Lys	Ala	Gly	Ala	Phe	Cys	Leu	Ser	Glu	Asp				
			740					745											
Ala	Gly	Leu	Gly	Ile	Ser	Ser	Thr	Ala	Ser	Leu	Arg	Ala	Phe	Gln	Pro				
		755					760					765							
Phe	Phe	Val	Glu	Leu	Thr	Met	Pro	Tyr	Ser	Val	Ile	Arg	Gly	Glu	Ala				
	770					775					780								
Phe	Thr	Leu	Lys	Ala	Thr	Val	Leu	Asn	Tyr	Leu	Pro	Lys	Cys	Ile	Arg				
785					790					795									
Val	Ser	Val	Gln	Leu	Glu	Ala	Ser	Pro	Ala	Phe	Leu	Ala	Val	Pro	Val				
			805						810										
Glu	Lys	Glu	Gln	Ala	Pro	His	Cys	Ile	Cys	Ala	Asn	Gly	Arg	Gln	Thr				
			820					825											
Val	Ser	Trp	Ala	Val	Thr	Pro	Lys	Ser	Leu	Gly	Asn	Val	Asn	Phe	Thr				
		835					840					845							
Val	Ser	Ala	Glu	Ala	Leu	Glu	Ser	Gln	Glu	Leu	Cys	Gly	Thr	Glu	Val				
	850					855					860								
Pro	Ser	Val	Pro	Glu	His	Gly	Arg	Lys	Asp	Thr	Val	Ile	Lys	Pro	Leu				
865					870					875									
Leu	Val	Glu	Pro	Glu	Gly	Leu	Glu	Lys	Glu	Thr	Thr	Phe	Asn	Ser	Leu				
			885						890										
Leu	Cys	Pro	Ser	Gly	Gly	Glu	Val	Ser	Glu	Glu	Leu	Ser	Leu	Lys	Leu				
			900					905											
Pro	Pro	Asn	Val	Val	Glu	Glu	Ser	Ala	Arg	Ala	Ser	Val	Ser	Val	Leu				
		915					920					925							
Gly	Asp	Ile	Leu	Gly	Ser	Ala	Met	Gln	Asn	Thr	Gln	Asn	Leu	Leu	Gln				
	930					935					940								

FIG. 7b

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Met	Pro	Tyr	Gly	Cys	Gly	Glu	Gln	Asn	Met	Val	Leu	Phe	Ala	Pro	Asn
945					950					955					960
Ile	Tyr	Val	Leu	Asp	Tyr	Leu	Asn	Glu	Thr	Gln	Gln	Leu	Thr	Pro	Glu
				965					970						975
Val	Lys	Ser	Lys	Ala	Ile	Gly	Tyr	Leu	Asn	Thr	Gly	Tyr	Gln	Arg	Gln
			980					985					990		
Leu	Asn	Tyr	Lys	His	Tyr	Asp	Gly	Ser	Tyr	Ser	Thr	Phe	Gly	Glu	Arg
		995				1000						1005			
Tyr	Gly	Arg	Asn	Gln	Gly	Asn	Thr	Trp	Leu	Thr	Ala	Phe	Val	Leu	Lys
	1010					1015					1020				
Thr	Phe	Ala	Gln	Ala	Arg	Ala	Tyr	Ile	Phe	Ile	Asp	Glu	Ala	His	Ile
025					1030					1035					1040
Thr	Gln	Ala	Leu	Ile	Trp	Leu	Ser	Gln	Arg	Gln	Lys	Asp	Asn	Gly	Cys
			1045						1050					1055	
Phe	Arg	Ser	Ser	Gly	Ser	Leu	Leu	Asn	Asn	Ala	Ile	Lys	Gly	Gly	Val
		1060						1065					1070		
Glu	Asp	Glu	Val	Thr	Leu	Ser	Ala	Tyr	Ile	Thr	Ile	Ala	Leu	Leu	Glu
	1075						1080					1085			
Ile	Pro	Leu	Thr	Val	Thr	His	Pro	Val	Val	Arg	Asn	Ala	Leu	Phe	Cys
	1090					1095					1100				
Leu	Glu	Ser	Ala	Trp	Lys	Thr	Ala	Gln	Glu	Gly	Asp	His	Gly	Ser	His
105					1110					1115					1120
Val	Tyr	Thr	Lys	Ala	Leu	Leu	Ala	Tyr	Ala	Phe	Ala	Leu	Ala	Gly	Asn
			1125						1130					1135	
Gln	Asp	Lys	Arg	Lys	Glu	Val	Leu	Lys	Ser	Leu	Asn	Glu	Glu	Ala	Val
		1140						1145					1150		
Lys	Lys	Asp	Asn	Ser	Val	His	Trp	Glu	Arg	Pro	Gln	Lys	Pro	Lys	Ala
		1155					1160					1165			
Pro	Val	Gly	His	Phe	Tyr	Glu	Pro	Gln	Ala	Pro	Ser	Ala	Glu	Val	Glu
	1170					1175					1180				
Met	Thr	Ser	Tyr	Val	Leu	Leu	Ala	Tyr	Leu	Thr	Ala	Gln	Pro	Ala	Pro
185					1190					1195					1200
Thr	Ser	Glu	Asp	Leu	Thr	Ser	Ala	Thr	Asn	Ile	Val	Lys	Trp	Ile	Thr
			1205						1210					1215	
Lys	Gln	Gln	Asn	Ala	Gln	Gly	Gly	Phe	Ser	Ser	Thr	Gln	Asp	Thr	Val
			1220					1225					1230		
Val	Ala	Leu	His	Ala	Leu	Ser	Lys	Tyr	Gly	Ala	Ala	Thr	Phe	Thr	Arg
	1235						1240						1245		
Thr	Gly	Lys	Ala	Ala	Gln	Val	Thr	Ile	Gln	Ser	Ser	Gly	Thr	Phe	Ser
	1250					1255					1260				
Ser	Lys	Phe	Gln	Val	Asp	Asn	Asn	Asn	Arg	Leu	Leu	Leu	Gln	Gln	Val
265					1270				1275						1280
Ser	Leu	Pro	Glu	Leu	Pro	Gly	Glu	Tyr	Ser	Met	Lys	Val	Thr	Gly	Glu
			1285					1290						1295	
Gly	Cys	Val	Tyr	Leu	Gln	Thr	Ser	Leu	Lys	Tyr	Asn	Ile	Leu	Pro	Glu
		1300						1305					1310		
Lys	Glu	Glu	Phe	Pro	Phe	Ala	Leu	Gly	Val	Gln	Thr	Leu	Pro	Gln	Thr
	1315						1320						1325		
Cys	Asp	Glu	Pro	Lys	Ala	His	Thr	Ser	Phe	Gln	Ile	Ser	Leu	Ser	Val
	1330						1335						1340		
Ser	Tyr	Thr	Gly	Ser	Arg	Ser	Ala	Ser	Asn	Met	Ala	Ile	Val	Asp	Val
345					1350				1355						1360
Lys	Met	Val	Ser	Gly	Phe	Ile	Pro	Leu	Lys	Pro	Thr	Val	Lys	Met	Leu
			1365						1370					1375	
Glu	Arg	Ser	Asn	His	Val	Ser	Arg	Thr	Glu	Val	Ser	Ser	Asn	His	Val
			1380					1385					1390		
Leu	Ile	Tyr	Leu	Asp	Lys	Val	Ser	Asn	Gln	Thr	Leu	Ser	Leu	Phe	Phe
	1395							1400						1405	

FIG. 7b

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Thr	Val	Leu	Gln	Asp	Val	Pro	Val	Arg	Asp	Leu	Lys	Pro	Ala	Ile	Val
1410					1415						1420				
Lys	Val	Tyr	Asp	Tyr	Tyr	Glu	Thr	Asp	Glu	Phe	Ala	Ile	Ala	Glu	Tyr
425					1430					1435					1440
Asn	Ala	Pro	Cys	Ser	Lys	Asp	Leu	Gly	Asn	Ala					
			1445						1450						

FIG. 7b